

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 620-0100

October 28, 1983

Mr. Norm Stout
State of Utah
Oil & Gas Division
4241 State Office Bldg.
Salt Lake City, Utah 84114

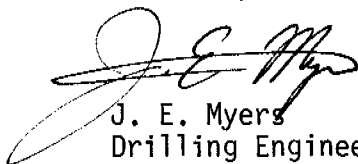
Re: Permit to Drill
Salt Valley # 1
Sec. 16-T-24-R20E
Grand County, Utah

Gentlemen:

Enclosed are the forms required to permit the subject well. Please note that the 13-point surface use plan is deficient of certain exhibits, as well as a surveyor's plat. These will be forwarded to you immediately upon receiving them from the field. Bonding requirements and water permits are being pursued at this time.

Our intent is to spud this well as soon as possible. Your earliest attention would be greatly appreciated. Thank you for your cooperation in this matter. If I can be of further assistance please call.

Sincerely,



J. E. Myers
Drilling Engineer

JEN/ead

cc: JKH, WF

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM

Attached to form OGCI-A
Ladd Petroleum Corporation
Salt Valley # 1
NE/4 NW/4 Sec. 16-24S-20E
500' FNL, 2130' FWL
Grand County, Utah

1. The Geologic Surface Formation:

The surface formation is the Cedar Mountain.

2. Estimated Tops of Important Geologic Markers:

Entrada	1155'
Chinle	2780'
Cedar Mesa	4730'
Upper Cutler	5200'
Lower Cutler	5540'
Upper Hermosa	6790'
Paradox Salt	8790'
Lower Hermosa (Base Salt)	10,290'
Mississippian Leadville	10,630'
Devonian Ouray	11,195'

3. Estimated Depths of Anticipated Water, Oil, Gas, or Minerals:

Entrada	1155'	Possible water prod.
Chinle	2780'	Possible water prod.
Cedar Mesa	4730'	Possible water prod.
Upper Cutler	5200'	Possible gas and water prod.
Lower Cutler	5540'	Possible gas and water prod.
Upper Hermosa	6790'	Possible oil and water prod.
Paradox Salt	8790'	Possible, oil, gas & water prod.
Lower Hermosa (Base Salt)	10,290'	Possible gas or water prod.
Mississippian Leadville	10,630'	Possible oil, gas and water prod.
Devonian Ouray	11,195'	Possible oil, gas and water prod.

4. The Proposed Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>Sec. Length</u>	<u>Size(OD)</u>	<u>Wt.Gr, Jt.</u>	<u>New or Used</u>
26"	0-200'	200'	20"	94# J-55 ST&C	New
17½"	0-4700'	4700'	13 3/8"	72#, N-80 LT&C	New
12¼"	0-10,400'	10,500'	9 5/8"	53.50# P 110 LT&C	New
8½"	10,200'-T.D.	1300' (Liner)	5½"	17#, N-80 LT&C	New

Cement Program:

Sfc. Casing: 550 sx Class "G" + $\frac{1}{4}$ #/sx flocele + 2% CaCl₂. Cement to surface.

1st Intermediate: 500 sx Class "G" + retarder + F.L. additive. Cement top at approximately 3000'.

2nd Intermediate: 1300 sx Class "G" + 18% salt + retarder + + F.L. additive. Cement top at approximately 6500'.

Production Casing: 400 sx Class "G" + retarder + F.L. additive. Cement top at approximately 10,200'.

5. The Operator's Minimum Specification for Pressure Control:

Exhibit "C" is a schematic diagram of the blowout preventor equipment. The BOP's will be hydraulically tested to working pressure after nipping up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams and annular preventor each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include an upper and lower kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

6. The Type and Characteristics of the Proposed Circulating Muds:

<u>Interval</u>	<u>Mud Type</u>	<u>Vis.</u>	<u>Fluid Loss</u>	<u>Weight(Lbs./Gal)</u>
0-200'	Fresh water/spud mud	35-40	N/C	8.4-8.6
200'-8500'	Fresh water/Gel/Chemical	32-35	10-15	8.8-9.0
8500'-10,400'	Brine water/Gel/Starch	32-35	10-15	10.2-10.5
10,400'- T.D.	Fresh water/Gel/Chemical	32-35	8-10	9.0-9.5

7. The Auxillary Equipment to be Used:

- (a) An upper and lower kelly cock will be kept in the string.
- (b) A float will be used at the bit.
- (c) A 2 man mud logging unit will be on location at 2000' depth to total depth.
- (d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.

8. The Testing, Logging, and Coring Programs to be Followed:

- (a) It is anticipated that 4 DST's will be run on warranted shows during drilling.
- (b) The logging program will consist of the following:

<u>LOGS</u>	<u>DEPTHS</u>
DIL-MSFL-GR-CAL	Surface casing to 8900' (110' into salt)
DLL-SFL-GR-CAL	8900' to T.D. (11,500')
CNL-FDC-GR-CAL	2000' to 8900', 8900' to T.D. (11,500')
BHC-GR-CAL	Surface casing to 8900', 8900' to T.D. (11,500')
Dipmeter	10,000' to T.D. (11,500')

- (c) No coring is anticipated.
- (d) The completion program will consist of acid clean-up. If treatment is indicated, appropriate sundry notice will be submitted for approval prior to start of completion operations.

9. Any Anticipated Abnormal Pressures or Temperatures:

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area or at the depths anticipated in this well.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area.

10. Anticipated Starting Date and Duration of Operations:

The anticipated starting date is set for November 15, 1983, or as soon as possible after examination and approval of drilling requirements. Operations should be completed within 60 days after spudding the well to casing point.

L.A. PRENDERGAST CONSULTING GEOLOGIST
187 Reta Drive
Grand Junction, Colorado 81503
(303) 245-3921

WELL DATA SUMMARY

Well Name: SALT VALLEY # 1

Operator: LADD PETROLEUM CORPORATION

Location: NE/4 NW/4 SECTION 16 T24S R20E

Province: GRAND COUNTY, UTAH

Area: WILDCAT

Drilling Contractor: CRC/Colorado Well Service Rig #140

Elevation: K.B. 4473

Depth Logged: 11,330

Well Status: Plugged and Abandoned

Casing Program: 13 3/8" @2657 ; 9 5/8" @ 8620 ; 7 3/4" @ 10,510

Mechanical Logs Run: DLL, LDT-CNL, BHC DIPMETER

Cores: NONE

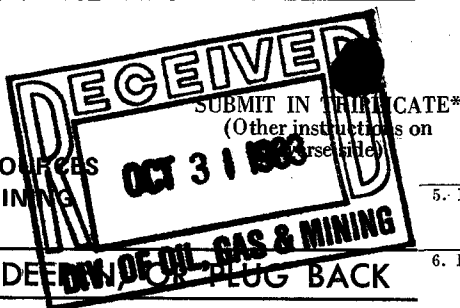
D.S.T.: DST #1 8320-36 HALLIBURTON
DST #2 10768-790 HALLIBURTON

Mudlogging Company: SMITH MUDLOGGING, Delta, Colorado

Engineering: GORDON ENGINEERING, Grand Junction, Colorado
Kenny Hayes, Drilling Foreman

Geologist: L.A. PRENDERGAST, CONSULTING GEOLOGIST

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING



APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

1a. Type of Work

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. Type of Well

Oil Well ☒Gas Well ☐Other ☐Single Zone ☒Multiple Zone ☐

2. Name of Operator

Ladd Petroleum Corporation

3. Address of Operator

830 Denver Club Bldg. Denver, Colorado 80202

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface

500' FNL 2130' FWL

Sec. 16-T24S-R20E

At proposed prod. zone

same

14. Distance in miles and direction from nearest town or post office*

Approximately 13 miles NW of Moab, Utah

15. Distance from proposed*

location to nearest

property or lease line, ft.

(Also to nearest drlg. line, if any)

500'

16. No. of acres in lease

640 gross

17. No. of acres assigned to this well

40

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.

none

19. Proposed depth

11,500'

20. Rotary or cable tools

Rotary

21. Elevations (Show whether DF, RT, GR, etc.)

4456' Ground

22. Approx. date work will start*

November 15, 1983

23.

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
26"	20"	94#	200'	550 sxs
17½"	13 3/8"	72#	4700'	500 sxs
12¼"	9 5/8"	53.50#	10,400'	1300 sxs
8½"	5½"	17#	11,500'	400 sxs

- 1.) Drill 26" hole to 200'. Set 20" casing at 200' and cement to surface. NU BOPE and test to rated working pressure. Test casing to 500 psi.
- 2.) Drill 17½" hole to 4700'. Set 13 3/8" casing at 4700' and cement. NU BOPE on 13 3/8" casing and test to rated working pressure. Test casing to 1000 psi.
- 3.) Drill 12¼" hole to 10,400'. Set 13 3/8" casing at 10,400' and cement. NU BOPE and test to rated working pressure. Test casing to 1000 psi.
- 4.) Drill 8½" hole to T.D. ($\pm 11,500'$). DST's will be run on all good shows. Log hole, if productive run and cement 5½" production casing as outlined. If dry P & A according to Utah Oil & Gas Commission regulations.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

Signed

Title Drilling Engineer

Date

(This space for Federal or State office use)

Permit No.

EXHIBITS ATTACHED:

- not attached*
- "A" Location and elevation plat.
 - "B" The ten point compliance program.
 - "C" The blowout preventor diagram.
 - "D" The multi-point requirements.

- "E" Access road map to location.
- "F" Radius map of field.
- "G & G1" Drill pad & production facilities.
- "H" Drill rig layout.

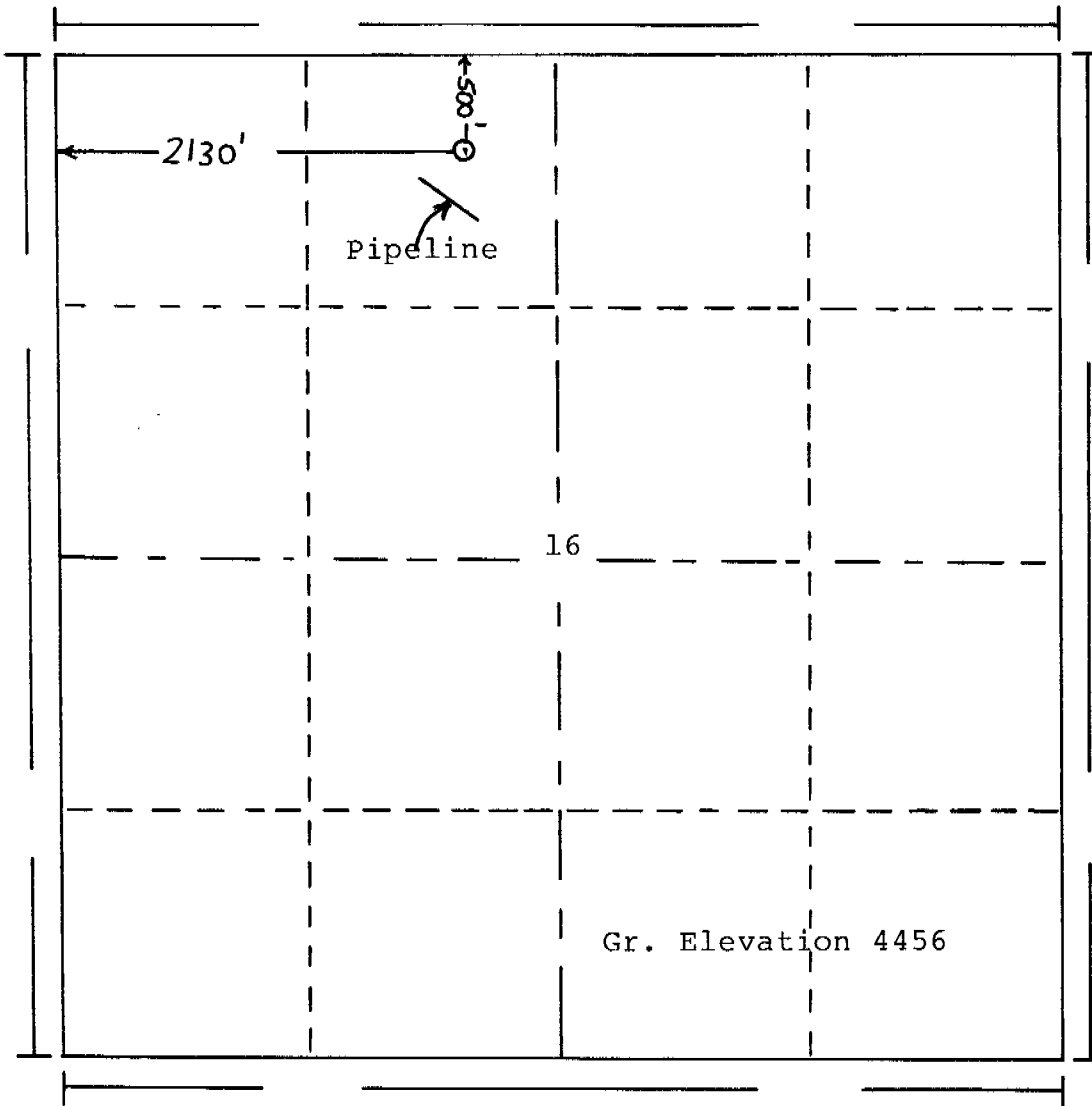


FORM F-106

Exhibit "A"

Ladd Petroleum Corporation
Salt Valley #1
500' FNL, 2130 FWL- Sec. 16-T24S-R20E
Grand County, Utah

R. 20 E



T. 24 S

Scale... 1" = 1000'

Powers Elevation of Denver, Colorado
has in accordance with a request from Jim Myers
for Ladd Petroleum Corp.
determined the location of Salt Valley #1
to be 500fnl, 2130fwl Section 16 Township 24 S
Range 20 E of the Salt Lake Meridian
Grand County, Utah

I hereby certify that this plat is an
accurate representation of a correct
survey showing the location of
Salt Valley #1

Date: 10-25-83

T. Nelson
Licensed Land Surveyor No. 2711
State of Utah

OPERATOR LAUD PETROLEUM CORP

DATE 11-1-83

WELL NAME SALT VALLEY #1

SEC NENW 16 T 24S R 20E COUNTY GRAND

43-019-3112

API NUMBER

STATE

TYPE OF LEASE

POSTING CHECK OFF:

☐

INDEX

☐

MAP

☐

HL

☐

NID

☐☐

PI

PROCESSING COMMENTS:

POTASH AREA — NO OIL OR GAS WELLS WITHIN 4960'
(SPCO REQUIREMENT)

✓ CHIEF PETROLEUM ENGINEER REVIEW:

11/8/83

11-8-83
[Signature]

APPROVAL LETTER:

SPACING:

☐

A-3

UNIT

☐

c-3-a

CAUSE NO. & DATE

☒

c-3-b

☐

c-3-c

SPECIAL LANGUAGE:

(see yellow attachment)

☒ RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.

☒ AUTHENTICATE LEASE AND OPERATOR INFORMATION

☐ VERIFY ADEQUATE AND PROPER BONDING

*still needs bond as of 11-7-23
Ok as per Hail 11-8-83*

☒ AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

☐ APPLY SPACING CONSIDERATION

☐ ORDER NO

☐ UNIT NO

☒ c-3-b

☐ c-3-c

☒ CHECK DISTANCE TO NEAREST WELL.

☒ CHECK OUTSTANDING OR OVERDUE REPORTS FOR OPERATOR'S OTHER WELLS.

☒ IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

☒ IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

☐ VERIFY LEGAL AND SUFFICIENT DRILLING WATER

LADD PETRO

SALT VALLEY #1

SURFACE 0 CEDAR WIT.

2780 CHINLE

4730 CEDAR MESA

5200 5 UPPER CUTLER

5540 LOWER CUTLER

6790 7 UPPER HERMOSA

8790 9 PARADOX SALT

10,290 10 LOWER HERMOSA
(BASE SALT)
10,630 MISS LEADVILLE

11,195 11 DEVONIAN QUARRY

12

13

20" SURFACE TO 200'

13 3/8" SURFACE TO 4760'

9 5/8" SURFACE TO 10400

CEMENT 18% SALT

8500
BRINE/GEL/
STARCH
MUD PROG-
RAM
10,400

5 1/2" 10,200 TO TD

The following stipulations shall receive full compliance, otherwise this letter of approval is void:

- 1- Prior to spudding, a copy of the Utah Division of Water Rights (tel 801-533-6071) approval for use of water at the drilling site shall be submitted to this office.
- 2- Prior to spudding, furnish by registered mail, a copy of the notice of intention to drill plus a copy of the plat or map, to all potash owners and/or lessees whose interests are within a $1/2$ mile radius of the proposed well.
- 3- Gamma Ray - Neutron, Gamma Ray - Sonic, or other appropriate logs shall be run promptly through the salt section, and a field copy of such logs shall be submitted to this office within 10 days.
- 4- a directional survey shall be run from a point at least 20 feet below the salt section to the surface, and shall be submitted to this office prior to well completion or plugging.

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 620-0100

October 31, 1983

RECEIVED
NOV 3 1983

DIVISION OF
OIL, GAS & MINING

Mr. Norm Stout
State of Utah
Oil & Gas Division
4241 State Office Bldg.
Salt Lake City, Utah 84114

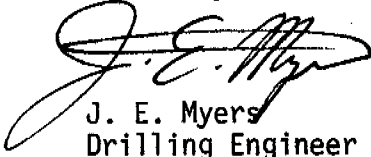
Re: Additional Exhibits to 13-Point
Surface Use Plan and A corrected
page to Exhibit "D"
Salt Valley # 1
500' FNL, 2130' FWL Sec. 16-T24S-R20E
Grand County, Utah

Gentlemen:

Enclosed are exhibits that were deficient in the 13-point surface use plan forwarded to you under cover letter dated 10/28/83. Also enclosed find a revised page 2 of Exhibit "D", "The multi-point requirements". A gas transmission line was inadvertently over-looked in the permitting process.

If any further information is required please don't hesitate to call, as we are on a tight time frame to begin drilling operations.

Sincerely,


J. E. Myers
Drilling Engineer

GJD/ead

cc: JKH

rte: SDG, WF

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 620-0100

Nov. 2, 1983

RECEIVED
NOV 4 1983

DIVISION OF
OIL, GAS & MINING

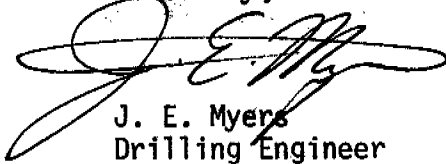
Mr. Norman Stout
State of Utah
Oil & Gas Division
4241 State Office Bldg.
Salt Lake City, Utah 84114

Re: Potash Mining Lease
Holders within $\frac{1}{2}$ mile radius of
drilling location
Salt Valley # 1 - 500' FNL, 2130' FWL
Sec 16-T-24S-R20E
Granc County, Utah

Gentlemen:

As per your request, and requirements of the Oil and Gas Division, contact was made with the Utah State Division of Lands to locate any potash leaseholds within the area. It was confirmed by them per phone conversation 11/2/83 that there are none within the $\pm \frac{1}{2}$ mile radius of the proposed drilling location.

Sincerely,



J. E. Myers
Drilling Engineer

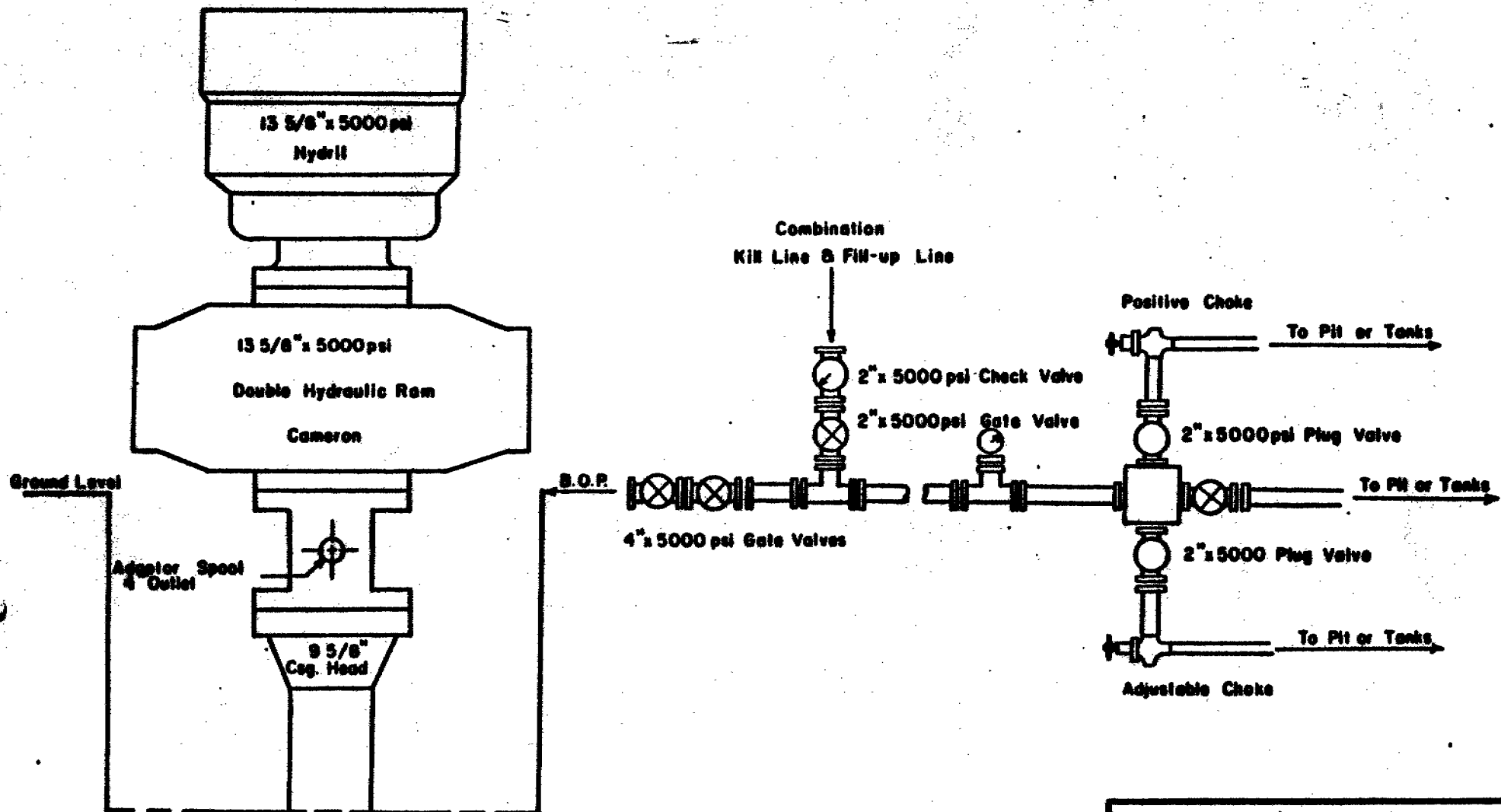
GJD/ead

cc: JKH

rte: SDG, WF

Exhibit "C"
Blowout Preventor Diagram
Ladd Petroleum Corporation

Exhibit "C"
 Salt Valley # 1
 NE/4 NW/4 500' FNL, 2130' FWL
 Sec. 16-T24S.R-20E
 Grand County, Utah





Typical B.O.P. Stack
&
Choke Manifold

LADD

March 3, 1980

EXHIBIT "E"
Ladd Petroleum Corp.
Salt Valley # 1
NE/4 NW/4 500' FNL, 2130' FWL

Sec. 16-T24S-R20E
Grand County, Utah

 Paved road  Access Road

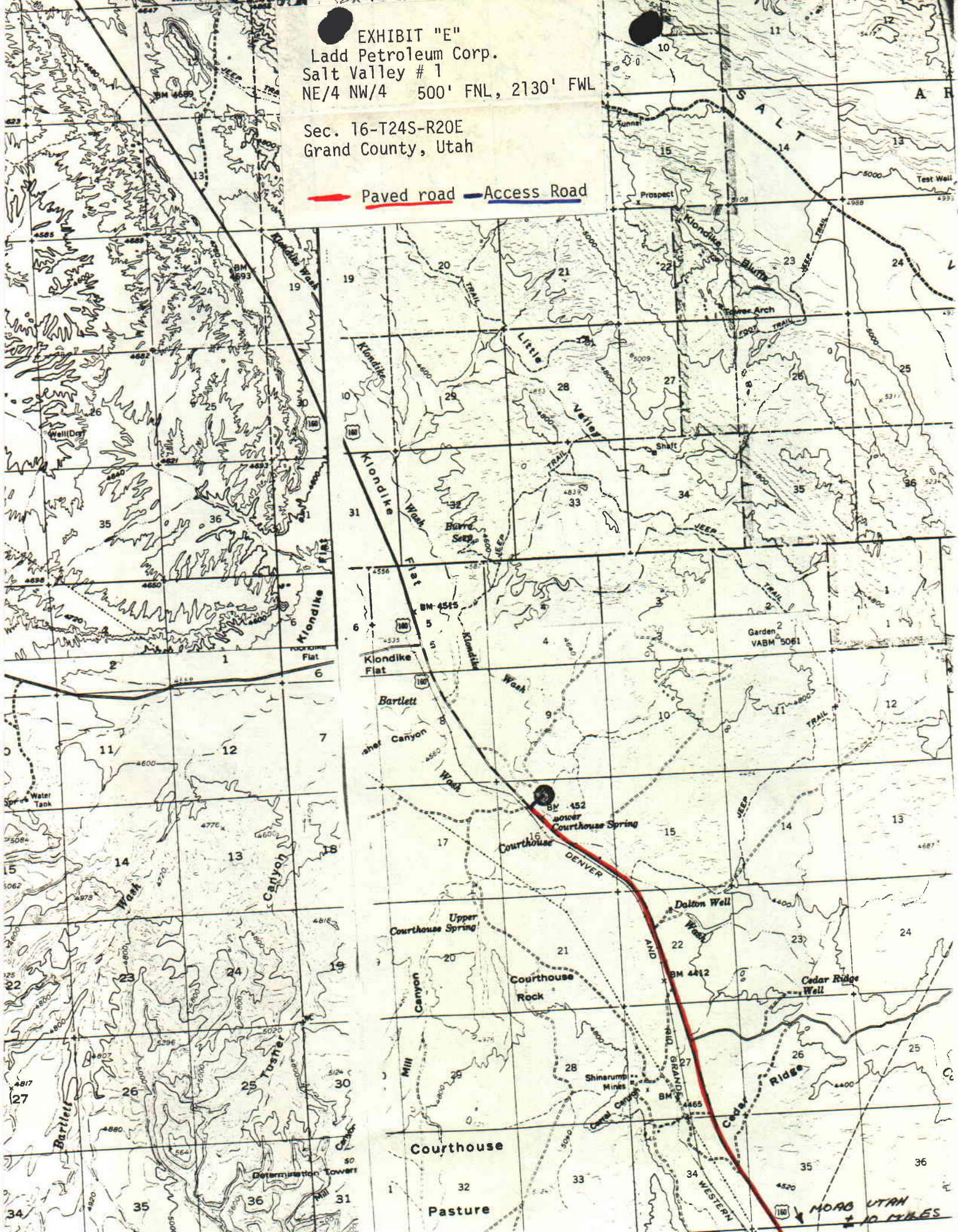


Exhibit "F"

Ladd Petroleum Corporation
Salt Velly # 1
NE/4 NE/4 500' FNL, 2130' FWL
Sec. 16-T24S-R20E
Grand County, Utah

Township 24 S, Range 20 E, County GRAND, State UTAH

PROSPECT NAME: SALT VALLEY

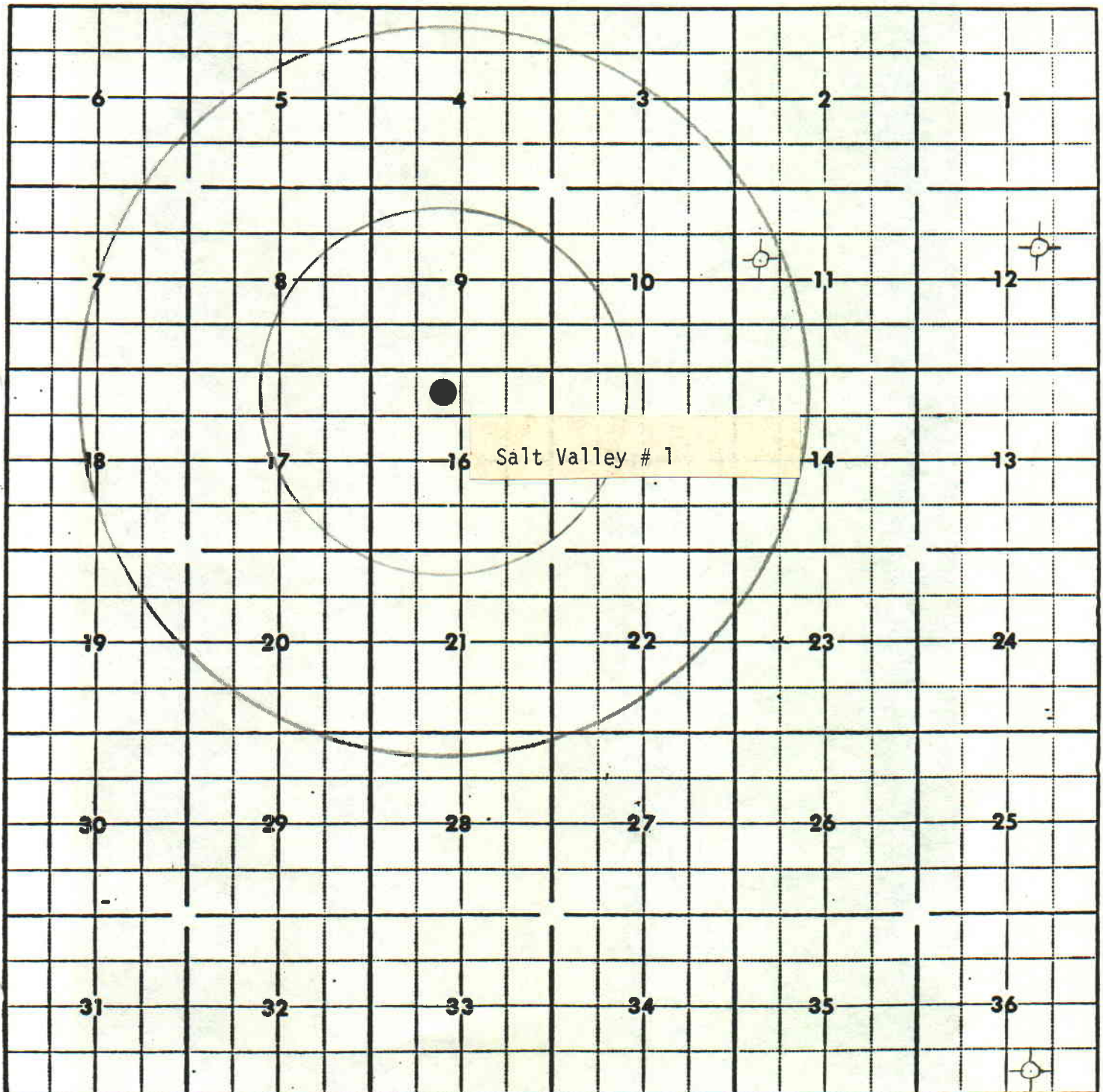


EXHIBIT "D"

MULTI-POINT REQUIREMENTS TO ACCOMPANY A.P.D.

Attached to from OGCI-A
Ladd Petroleum Corporation
Salt Valley # 1
NE/4 NW/4 Sec. 16-24S-20E

Grand Valley, Utah

1. Existing Roads:

- A. The proposed well site and elevation plat is shown as Exhibit "A".
- B. All roads to location are color coded on Exhibit "E".
- C. All roads to location are color coded on Exhibit "E". Approximately 600' of access road will be required as shown on Exhibit "E".
- D. This is an exploratory well. All existing roads within a 3 mile radius are shown on Exhibit "E".
- E. N/A
- F. The existing roads need no improvement. Maintenance will be performed as required. The grade is 6% or less.

2. Planned Access Roads:

Map showing all necessary access roads to be constructed or reconstructed is shown as Exhibit "E" for the following:

A. Drilling Operations

- 1) The maximum width of the 600' of new access required for drilling will be 15'.
- 2) The grade will be 6% or less.
- 3) No turnouts are planned.
- 4) Proper drainage will be constructed where required. Brush will be cleared, and a temporary road will be prepared by a grader.
- 5) No culverts are anticipated. No major cuts or fills are anticipated along the access road during drilling operations.
- 6) No gates, fence cuts or cattle guards will be installed.
- 7) The new access road to be constructed was centerline flagged.
- 8) No surfacing material will be required.

B. Production:

- 1) If production is obtained, new road will be graded and surfaced with scoria and drainage will be constructed. If accumulated material is not sufficient, additional materials will be provided by dirt contractor.

3. Location of Existing Wells:

For all existing wells within 2 two-mile radius of exploratory well, see Exhibit "F".

- 1) There are no water wells within 2 two-mile radius.
- 2) There is one abandoned well in this two-mile radius.
- 3) There are no temporarily abandoned wells within this two-mile radius.
- 4) There are no disposal wells.
- 5) There are no wells presently being drilled.
- 6) There are no producing wells within this two-mile radius.
- 7) There are no shut in wells.
- 8) There are no injection wells.
- 9) There are no monitoring or observation wells for other uses.

4. Location of Existing and/or Proposed Facilities:

A. Within a one mile radius of location, the following existing facilities are owned or controlled by Ladd Petroleum Corporation or other lessee/operator.:

- 1) Tank batteries: none
- 2) Production facilities: None
- 3) Oil gathering lines: None
- 4) Gas gathering lines: (Gas transmission line running NW to SE across SW. corner of drill pad)
- 5) Injection lines: None
- 6) Disposal lines: None

B. If production is obtained new facilities will be as follows:

- 1) Location of production facilities will be located on solid ground of cut area of drill pad, as shown on Exhibit "G".
- 2) All well flowlines will be buried and will be on the wellsite and battery site.
- 3) Production facilities will be approximately 250' long and 175' wide. Areas of drill pad not required for production facilities will be rehabilitated.
- 4) All construction materials for battery site and pad will be obtained from site. No additional material from outside sources is anticipated.
- 5) All necessary pits will be fenced and flagged to protect livestock and wildlife.

C. Rehabilitation, whether well is productive or dry, will be made on all unused areas.

5. Location and Type of Water Source:

- A. Fresh water and salt water will be hauled by a commercial contractor. The commercial contractor will furnish water source and permits in accordance with Utah's "Approved water rights in sufficient quantity".
- B. Water will be transported by truck over existing roadways.
- C. No water well is to be drilled on this lease.

6. Construction Materials:

- A. No construction materials are needed for drilling well or constructing access roads into the location during drilling. The surface soil materials will be sufficient.
- B. No construction materials will be taken from the area.
- C. All surface soil materials for construction of access roads for drilling are sufficient. If well is productive, and material from road and pad is not sufficient, additional materials will be provided by a dirt contractor.
- D. All major access roads presently exist as shown on Exhibit "E".

7. Handling of Waste Materials and Disposal:

- 1) Drill cuttings will be buried in the reserve pit.
- 2) Drilling fluids will be handled in the reserve pit.
- 3) Any fluids produced during drilling test or while making production will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in reserve pit. Any spills of oil, gas, saltwaters or other noxious fluids will be cleaned up and removed. If well is productive, produced water will be disposed of on site for 30 days only, or 90 days with state permission.
- 4) Portable chemical facilities will be provided for human waste.
- 5) Garbage and non-flammable waste and salt and other chemicals produced during drilling or testing will be handled in trash pit. Drill fluids, water, drilling mud and tailings will be kept in reserve pit, as shown on Exhibit "H". The trash pit will be totally enclosed with small mesh wire to prevent wind scattering trash before being buried or removed. Reserve pit will be fenced on three sides during drilling and fourth side fenced upon removal of the rig.
- 6) After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. All dangerous open pits will be fenced during drilling and kept closed until such time as pit is leveled.

8. Ancillary Facilities:

No airstrip or other facilities will be built during drilling of this well.

9. Well Site Layout:

- 1) Exhibit "G" is the drill pad layout as staked, with elevations. Cuts and fills have been drafted to visualize and planned cut across the location spot and to the deepest part of the pad. Topsoil is 6" deep and will be stockpiled as shown on Exhibit "G".
- 2.) Exhibit "H" is a plan diagram of the proposed rig and equipment, reserve pit, trash pit, pipe racks and mud tanks, access road, parking and turn-around. No permanent living facilities are planned. There will be a trailer on site.
- 3) Exhibit "G" is a diagram showing the proposed production facilities layout.
- 4) The reserve pits will not be lined.

10. Plans for Restoration:

- 1) If well is abandoned, site will be restored to original condition as nearly as possible. Backfilling leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away to an approved sanitary landfill immediately after drilling is completed. If production is obtained the unused area will be restored as soon as possible.
- 2) The soil banked material will be spread over the area. Revegetation is recommended for road area as well as around drill pad.
- 3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from entering; and the fencing will be maintained until leveling and cleanup are accomplished.
- 4) If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or will be covered with wire mesh.
- 5) The rehabilitation operations will begin immediately after the drilling rig is removed. Removal of oil and other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best in Spring 1984, unless otherwise requested.

11. Other Information:

- 1) The soil is a sand and broken basalt.
No distinguishing geological features are present. The area is covered with cactus, native grasses and greasewood. There are rabbits and reptiles in the area.
- 2) The primary surface is for grazing.
- 3) The closest live water is the Colorado River approximately 11 miles SE of the location.
- 4) No occupied dwelling is noted in the immediate area.
- 5) There are no reported restrictions or reservations noted on the oil & gas lease.
- 6) Drilling is planned for November 15, 1983. It is anticipated that the casing point will be reached within 60 days after commencement of drilling.

12. Lessee's or Operator's Representative:

Steve Gilbert
Ladd Petroleum Corporation
830 Denver Club Bldg.
518 17th St.
Denver, Colorado 80202
Phone (303) 620-0213

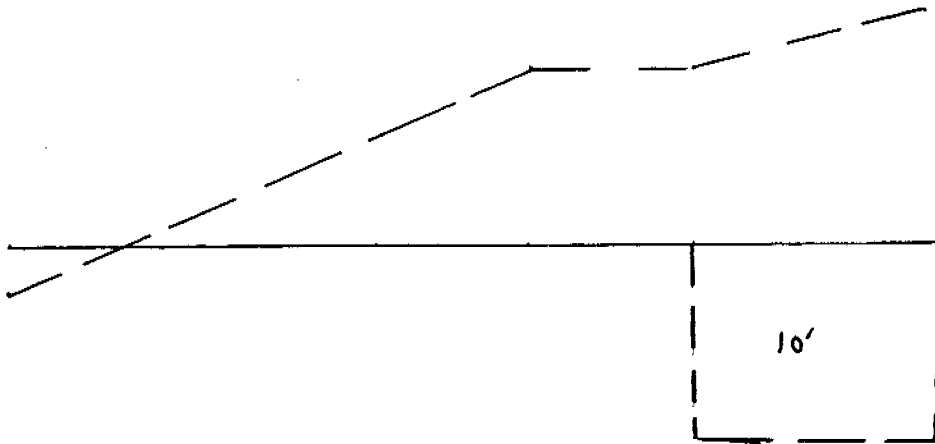
James E. Myers
Ladd Petroleum Corporation
830 Denver Club Bldg.
518 17th St.
Denver, Colorado 80202
Phone (303) 620-0273

Exhibit "G"

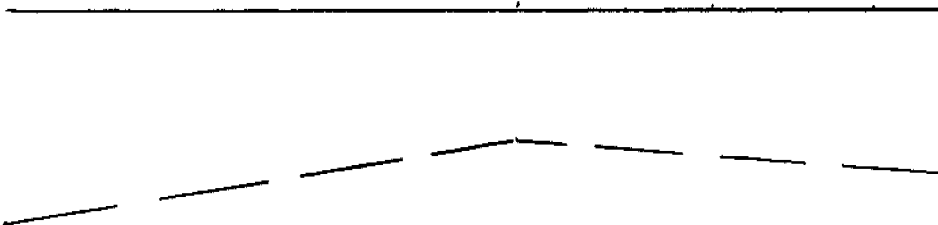
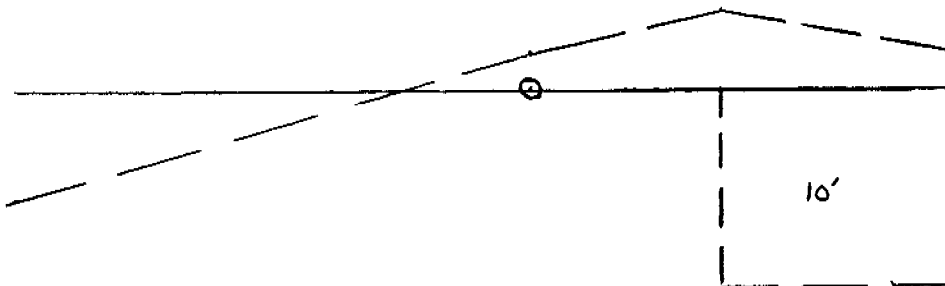


POWERS ELEVATION

Ladd Petroleum Corp.
#1 Salt Valley
Grand County, Utah
500' FNL, 2130' FWL
Pit & Pad crossections



Pad Cut, 245x380=7395yds
Pad Fill, 245x380=9596yds
Pit cut, 60x180=4000yds





POWERS ELEVATION

Exhibit "G"

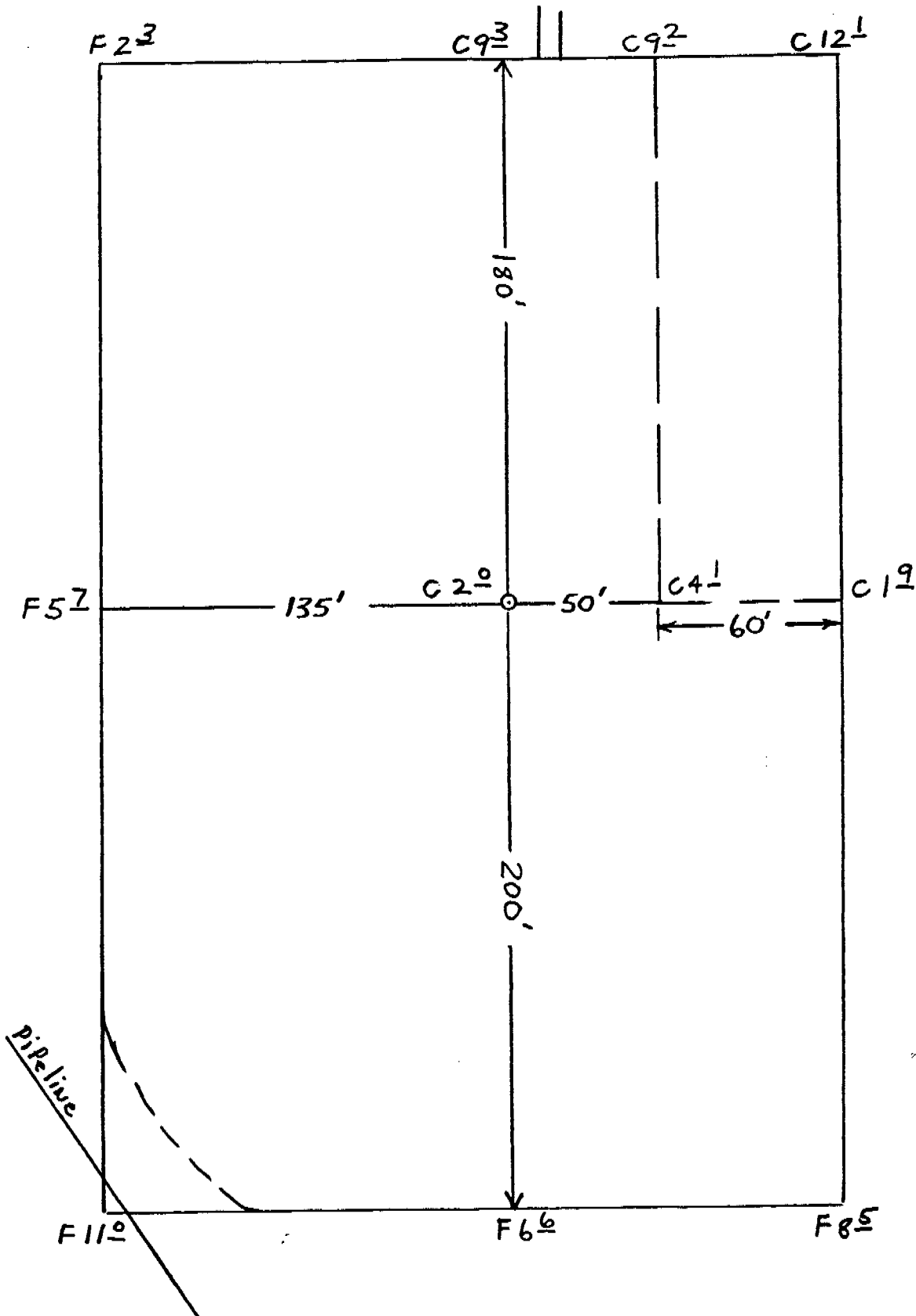
Ladd Petroleum Corp.

#1 Salt Valley

Grand County, Utah

500' FNL, 2130' FWL

Pit & Pad Layout



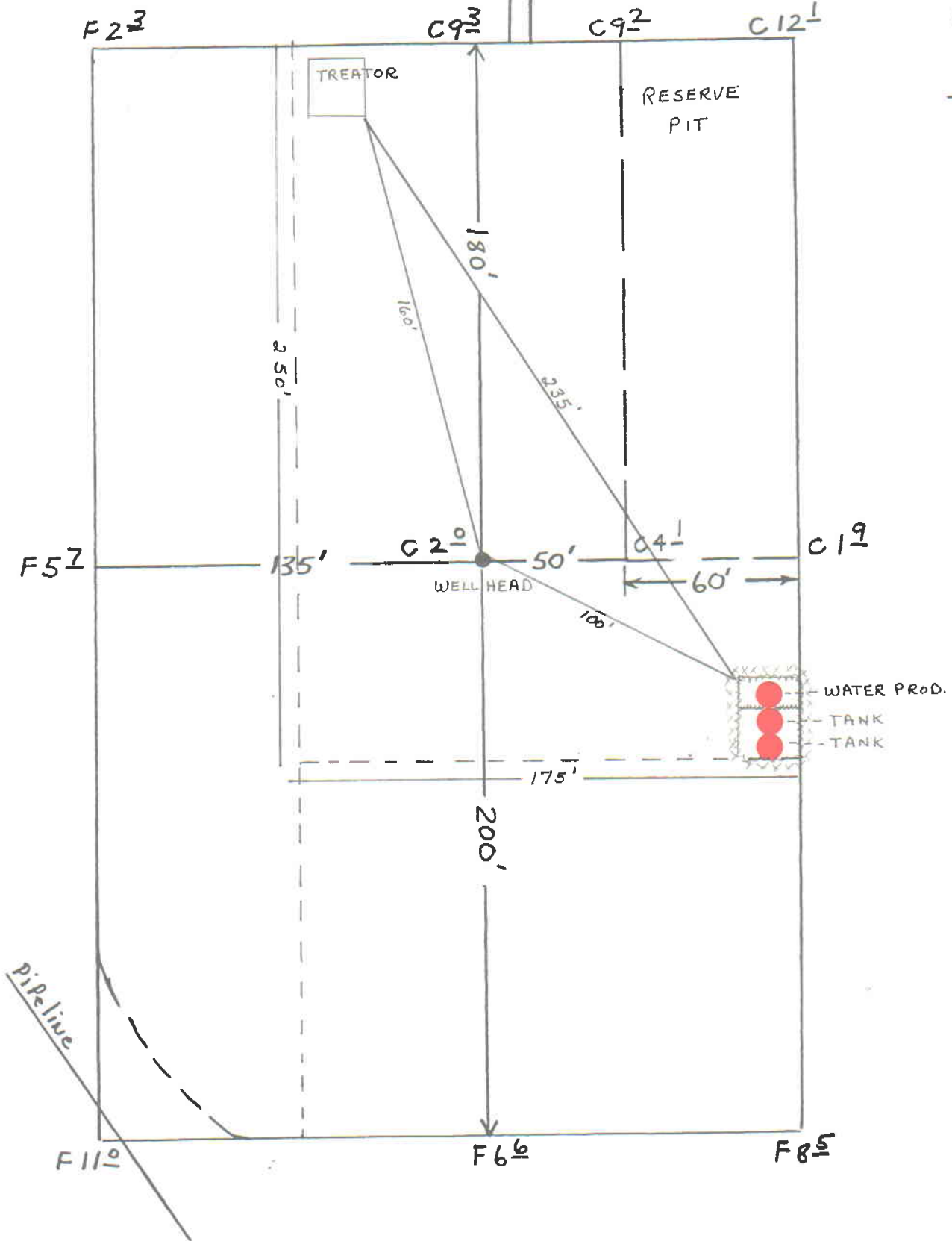


POWERS ELEVATION

Ladd Petroleum Corp.
#1 Salt Valley 500' FNL, 2130 FWL
Grand County, Utah

Production facilities layout

N

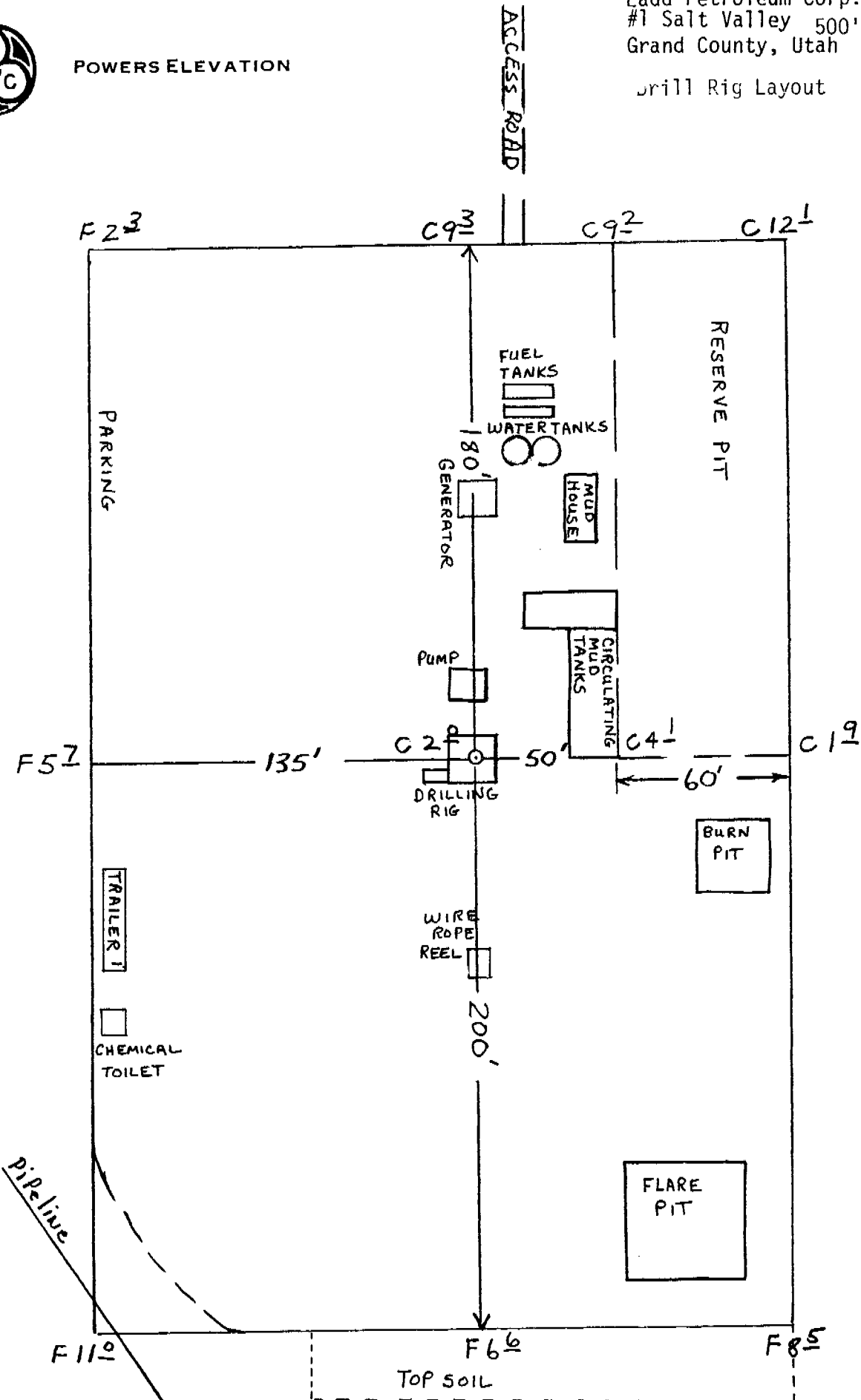


Ladd Petroleum Corp.
#1 Salt Valley 500' FNL, 2130' FWL
Grand County, Utah

Drill Rig Layout



POWERS ELEVATION





STATE OF UTAH
NATURAL RESOURCES
Water Rights

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dee C. Hansen, State Engineer

1636 West North Temple • Salt Lake City, UT 84116 • 801-533-6071

November 4, 1983

TEMPORARY

Attn: Jim Meyers Ladd Petroleum
830 Denver Club Bldg.
Denver, CO 80202

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 01-193 (T59922)

Enclosed is a copy of the above numbered approved Temporary Application. This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire May 4, 1984, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it is with the Area Engineer, Mark Page. The telephone number is (801)637-1303.

Yours truly,

Dee C. Hansen, P. E.
State Engineer

DCH:slm

Enclosure

APPLICATION TO APPROPRIATE WATER

TEMPORARY

NOTE:—The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah; for uses indicated by (X) in the proper blanks, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

OCT 31 1984

1. Irrigation ☐ Domestic ☐ Stockwatering ☐ Municipal ☐ Power ☐ Mining ☐ Other Uses ☒

2. The name of the applicant is Ladd Petroleum Attn: Jim Meyers

3. The Post Office address of the applicant is 830 Denver Club Bldg. Denver, CO. 80202

4. The quantity of water to be appropriated second-feet and/or 3.5 acre-feet

5. The water is to be used for Oil Well Drilling from Nov. 4, 83 to May 4, 1984
(Major Purpose) (Month) (Day) (Month) (Day)

other use period from to
(Minor Purpose) (Month) (Day) (Month) (Day)

and stored each year (if stored) from to
(Month) (Day) (Month) (Day)

6. The drainage area to which the direct source of supply belongs is
(Leave Blank)

7. The direct source of supply is* Colorado River

(Name of stream or other source)

which is tributary to , tributary to

*Note.—Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in Grand County, situated at a point*
South 1300' & East 1500' from NW Cor. Sec. 26, T25S, R21E, SLB&M.

(2 miles NW of Moab)

*Note.—The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of Portable pump and tank truck to place
of use.

10. If water is to be stored, give capacity of reservoir in acre-feet height of dam
area inundated in acres legal subdivision of area inundated

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:

 Total Acres

12. Is the land owned by the applicant? Yes No XX If "No," explain on page 2.

13. Is this water to be used supplementally with other water rights? Yes No XX

If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity.

15. If application is for mining, the water will be used in Mining District at the mine, where the following ores are mined

16. If application is for stockwatering purposes, number and kind of stock watered

17. If application is for domestic purposes, number of persons , or families

18. If application is for municipal purposes, name of municipality

19. If application is for other uses, include general description of proposed uses Drilling of
Salt Valley #1 (Oil Well)

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. NW 1/4 Sec. 16, T24S, R20E, SLB&M.

21. The use of water as set forth in this application will consume 3.5 second-feet and/or acre-feet of water and second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows:

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

Leased from Division of State Lands.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

Signature of Applicant*

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH. }
County of..... } ss

On the day of, 19....., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:

(SEAL)

1EHL00VBA

Notary Public

FEEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH

Flow rate — c.f.s.	Cost
0.0 to 0.1	\$ 15.00
over 0.1 to 0.5	30.00
over 0.5 to 1.0	45.00
over 1.0 to 15.0	45.00 plus \$7.50 for each cfs above the first cubic
over 15.0	150.00 foot per second.

Storage — acre-feet	
0 to 20	22.50
over 20 to 500	45.00
over 500 to 7500	45.00 plus \$7.50 for each 500 a.f. above the first
over 7500	150.00 500 acre feet.

(This section is not to be filled in by applicant)

STATE ENGINEER'S ENDORSEMENTS

1. 1/28/83 Application received by mail in State Engineer's office by 1890
over counter
2. Priority of Application brought down to, on account of
3. 10/28/83 Application fee, \$ 15.00, received by 104/83 Rec. No. 03801
4. Application microfilmed by Roll No.
5. Indexed by Platted by
6. 10-31-83 Application examined by SP
7. Application returned, or corrected by office
8. Corrected Application resubmitted by mail to State Engineer's office.
over counter
9. Application approved for advertisement by
10. Notice to water users prepared by
11. Publication began; was completed
Notice published in
12. Proof slips checked by
13. Application protested by
14. Publisher paid by M.E.V. No.
15. Hearing held by
16. Field examination by
17. 10-31-83 Application designated for approval SP 5.6
rejection
18. 11/4/83 Application copied or photostated by slm proofread by
19. 11/4/83 Application approved
rejected x

20. Conditions:

This Application is approved, subject to prior rights, as follows:

- a. Actual construction work shall be diligently prosecuted to completion.
- b. Proof of Appropriation shall be submitted to the State Engineer's office by NPR
- c. TEMPORARY APPROVAL -- EXPIRES May 4, 1984.

Dee C. Hansen
Dee C. Hansen, P.E., State Engineer

21. Time for making Proof of Appropriation extended to
22. Proof of Appropriation submitted.
23. Certificate of Appropriation, No., issued

Application No. 14 59-127

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

All waters in this state, whether above or under the ground, are the property of the public, subject to all existing rights to the use thereof. No appropriation of the unappropriated public water may be made and no rights to the use thereof shall be recognized except Application for such appropriation first be made to the State Engineer.

The approval of this Application is not a Certificate of Appropriation. It is merely your authority to begin construction work, which must be prosecuted diligently to completion. To secure a Certificate of Appropriation under this Application, Proof of Appropriation must be submitted within the time limit allowed by the State Engineer. The amount of water for which Certificate will be issued will depend upon the amount of water actually put to a beneficial use, not to exceed, however, the amount of water specified in this Application. Proof of Appropriation must be made in accordance with the requirements of the law. For further information write the State Engineer.

TEMPORARYAPPLICATION TO APPROPRIATE WATER
STATE OF UTAHApplication No. 5952101-201

NOTE:—The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for uses indicated by (X) in the proper box or boxes, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah. DEC 21

1. Irrigation ☐ Domestic ☐ Stockwatering ☐ Municipal ☐ Power ☐ Mining ☐ Other Uses ☒

STATE ENGINEER
PRICE, UTAH

2. The name of the applicant is C. & B. Trucking

3. The Post Office address of the applicant is P.O. Box 1294 Moab, Utah 84532

4. The quantity of water to be appropriated _____ second-feet and/or 3.5 acre-feet

5. The water is to be used for Oil Well Drilling from December 21, 1983 to Dec. 20, 1984
(Major Purpose) (Month) (Day) (Month) (Day)

other use period _____ from _____ to _____
(Minor Purpose) (Month) (Day) (Month) (Day)

and stored each year (if stored) from _____ to _____
(Month) (Day) (Month) (Day)

6. The drainage area to which the direct source of supply belongs is _____
(Leave Blank)

7. The direct source of supply is* Colorado River
(Name of stream or other source)

which is tributary to _____, tributary to _____

*Note.—Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in Grand County, situated at a point*
S. 1300 ft. & E. 1200 ft. from NW Cor. Sec. 26, T25S, R21E, SLB&M.

(2 miles NW of Moab)

*Note.—The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of Portable pump and tank truck to
place of use.

10. If water is to be stored, give capacity of reservoir in acre-feet _____ height of dam _____
area inundated in acres _____ legal subdivision of area inundated _____

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:

_____ Total _____ Acres

12. Is the land owned by the applicant? Yes _____ No X If "No," explain on page 2.

13. Is this water to be used supplementally with other water rights? Yes _____ No X
If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity. _____

15. If application is for mining, the water will be used in _____ Mining District at
the _____ mine, where the following ores are mined _____

16. If application is for stockwatering purposes, number and kind of stock watered _____

17. If application is for domestic purposes, number of persons _____, or families _____

18. If application is for municipal purposes, name of municipality _____

19. If application is for other uses, include general description of proposed uses _____
Drilling oil well

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 16, T24S, R20E, SLB&M. Salt Valley Well #1

21. The use of water as set forth in this application will consume 3.5 second-feet and/or acre-feet of water and _____ second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: _____

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

Right of way has been obtained.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

B. E. Bullock Jr.

Signature of Applicant*

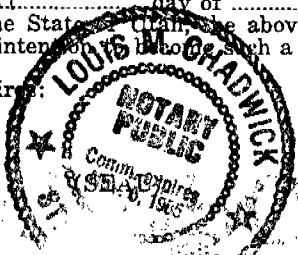
*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH,
County of *Carbon* }

On the *21st* day of *December*, 19*23*, personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:



Louis M. Chadwick

Notary Public

FEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH

Flow rate — c.f.s.	Cost	
0.0 to 0.1	\$ 15.00	
over 0.1 to 0.5	30.00	
over 0.5 to 1.0	45.00	
over 1.0 to 15.0	45.00	plus \$7.50 for each cfs above the first cubic
over 15.0	150.00	foot per second.

Storage — acre-feet

0 to 20	22.50	
over 20 to 500	45.00	
over 500 to 7500	45.00	plus \$7.50 for each 500 a.f. above the first
over 7500	150.00	500 acre feet.

(This section is not to be filled in by applicant)

STATE ENGINEER'S ENDORSEMENTS

- Dec 21, 1983 Application received by mail over counter in State Engineer's office by SP
- Priority of Application brought down to, on account of
- 12-27-83 Application fee, \$15.00, received by an Rec. No. 04189
- Application microfilmed by Roll No.
- 12-27-83 Indexed by an Platted by
- 12-21-83 Application examined by SP
- Application returned, or corrected by office
- Corrected Application resubmitted by mail over counter to State Engineer's office.
- Application approved for advertisement by
- Notice to water users prepared by
- Publication began; was completed
Notice published in
- Proof slips checked by
- Application protested by
- Publisher paid by M.E.V. No.
- Hearing held by
- Field examination by
- 12-21-83 Application designated for approval rejection SP S.G.
- 1/20/84 Application copied or photostated by slm proofread by
- 1/20/84 Application approved rejected
- Conditions:**
This Application is approved, subject to prior rights, as follows:
a. Actual construction work shall be diligently prosecuted to completion.
b. Proof of Appropriation shall be submitted to the State Engineer's office by NPR
c. TEMPORARY APPROVAL -- Expires December 20, 1984.

Dee C. Hansen
Dee C. Hansen, P.E., State Engineer

- Time for making Proof of Appropriation extended to
- Proof of Appropriation submitted.
- Certificate of Appropriation, No., issued

TEMPORARY

Application No. 59571

01-201

WATER RIGHTS DATA BASE
ENTERED - DATE 12/21/83 BY SP
VERIFIED - DATE 12/21/83 BY SP

November 8, 1985

Ladd Petroleum Corporation
830 Denver Club Bldg.
Denver, Colorado 80202

RE: Well No. Salt Valley #1
NENW Sec. 16, T. 24S, R. 20E
500' FNL, 2130' FWL
Grand County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3(b), General Rules and Regulations and Rules of Practice and Procedure. The following stipulations shall receive full compliance, otherwise this letter of approval is void:

1. Prior to spudding, accopy of the Utah Division of Water Rights (Phone No. 801-533-6071) approval for use of water at the drilling site shall be submitted to this office.
2. Prior to spudding, furnish by registered mail, a copy of the notice of intention to drill plus a copy of the plat or map, to all potash owners and/or lessees whose interests are within a 1/2 mile radius of the proposed well.
3. Gamma Ray-Neutron, Gamma Ray-Sonic, or other appropriate logs shall be run promptly through the Salt Section, and a field copy of such logs shall be submitted to this office within 10 days
4. A directional survey shall be run from a point at least 20 feet below the Salt Section to the surface, and shall be submitted to this office prior to well completion or plugging.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

RONALD J. FIRTH - Chief Petroleum Engineer
Office: 533-5771
Home: 571-6968

Ladd Petroleum Corporation
Well No. Salt Valley #1
Pag 3
November 8, 1983

Enclosed please find Form OCC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-019-31112.

Sincerely,

Norman C. Stout
Administrative Assistant

NCS/as
cc: State Lands
Encl.

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 620-0100

Nov. 9, 1983

Norman Stout
State of Utah
Oil & Gas Division
4241 State Office Bldg.
Salt Lake City, Utah 84114

RECEIVED
NOV 15 1983
DIVISION OF
OIL, GAS & MINING

Re: Application to appropriate water
Salt Valley # 1
Sec. 16-T24S-R20E
Grand Valley, Utah

Gentlemen:

Please find enclosed the executed water appropriation forms required to drill this well.

I trust this will satisfy your requirements in this area of permitting. Please advise if any further information is required.

Sincerely,


J. E. Myers
Drilling Engineer

JEM/ead

cc: JKH
WF

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 620-0100

Dec. 15, 1983

Norman Stout
State of Utah
Oil & Gas Division
4241 State Office Bldg.
Salt Lake City, Utah 84114

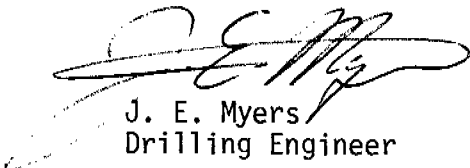
Re: Amended Application to Drill
Salt Valley # 1
Sec. 16-T24S-R20E
Grand County, Utah

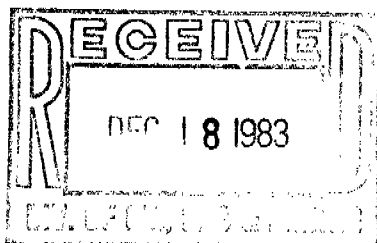
Gentlemen:

Find enclosed an amended application to drill the subject well. The original application to drill was approved on 11/8/83.

This well must be spudded by 12/31/83. Please review this information at your earliest convenience and notify me of your approval or need for any additional information.

Sincerely,


J. E. Myers
Drilling Engineer



JEM/ead

cc: CEP

rt: SDG, WF

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN DUPLICATE*
 (Other instructions on
 reverse side)

8 1983

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work **DRILL** ☒ **DEEPEN** ☐ **PLUG BACK** ☐

b. Type of Well
 Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone ☐

2. Name of Operator
Ladd Petroleum Corporation

3. Address of Operator
830 Denver Club Bldg, Denver, Colo. 80202

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
 At surface 500' FNL, 2130' FWL, Section 15-T24S-R20E
 At proposed prod. zone same

5. Lease Designation and Serial No.
ML-33530

6. If Indian, Allottee or Tribe Name
N/A

7. Unit Agreement Name
N/A

8. Farm or Lease Name
Salt Valley

9. Well No.
1

10. Field and Pool, or Wildcat
Wildcat

11. Sec., T., R., M., or Blk. and Survey or Area
Sec. 16-T24S-R20E

12. County or Parrish 13. State
Grand Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. line, if any) 500'

16. No. of acres in lease 640 gross

17. No. of acres assigned to this well 40

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft. None

19. Proposed depth 11,500'

20. Rotary or cable tools Rotary

21. Elevations (Show whether DF, RT, GR, etc.)
4456' Ground

22. Approx. date work will start*
Dec. 20, 1983

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17 1/2"	13 3/8"	61#	2500'	2000 sxS
12 1/4"	9 5/8"	53.5 & 43.5#	9000'	500 sxS
8 1/2"	7 3/4" (Liner)	46.10#	10,500'	1800 sxS
6 1/2"	5" (Liner)	15#	11,500'	200 sxS

1. Drill a 17 1/2" hole to 2500'. Set 13 3/8" casing @ 2500' and cement to surface. NU BOPE. and test to rated working pressure. Test casing to 500 psi.
2. Drill a 12 1/4" hole to 9000' & log hole. Set 9 5/8" casing @ 9000' & cement. NU BOPE and test to rated working pressure. Test casing to 1000 psi.
3. Drill an 8 1/2" hole to 10,500' & log hole. Set a 7 3/4" liner from 10,500' to 8800' & cement to liner top. NU BOPE & test to rated working pressure. Test casing to 1000 psi.
4. Drill a 6 1/2" hole to 11,500'. DST's will be run on all good shows. Log hole. If productive run 5" production liner from TD to 10,300' and cement. If dry P & A according to Utah Oil & Gas commission regulations.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. [Signature] Title Drilling Engineer

(This space for Federal or State office use)

Permit No. _____ Approval Date 12-20-83

Approved by _____ Title _____

Conditions of approval, if any: _____

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 12-20-83
 BY: [Signature]

FULL COMPLIANCE WITH
 RULE C-23 IS STIPULATED

*See Instructions On Reverse Side

LADD PETRO

SALT VALLEY #1

SURFACE 0 CEDAR WIT.

1

2

3

2780

CHINLE

4

5

4730

CEDAR MESA

5200

UPPER CUTLER

5540

LOWER CUTLER

6

6790

UPPER HERMOSA

7

8

8790

PARADOX SALT

9

10,290

10

LOWER HERMOSA
(BASE SALT)

10,630

MISS LEADVILLE

11,195

11

DEVONIAN QUARRY

12

13

AS AMENDED

13 $\frac{3}{8}$ @ 2500 CTS9 $\frac{5}{8}$ @ 9000 500 SXS IN 12 $\frac{1}{4}$ HOLE7 $\frac{3}{4}$ LINER @ 10500 CTL

5 LINER @ 11,500 CTL IF PRODUCTIVE

DIVISION OF OIL, GAS AND MINING

SPODDING INFORMATION

NAME OF COMPANY: LADD PETROEUM

WELL NAME: SALT VALLEY #1

SECTION NENW 16 TOWNSHIP 24S RANGE 20E COUNTY GRAND

DRILLING CONTRACTOR CRC COLORADO

RIG # 140

SPODDED: DATE 12-29-83

TIME 11:30 p.m.

How ROTARY

DRILLING WILL COMMENCE

REPORTED BY BARBARA BROWN

TELEPHONE #

DATE 12-30-83 SIGNED GL



116 State Capitol Building
Salt Lake City, UT 84114
Telephone 801-533-5245

office of planning and budget

Scott M. Matheson, Governor

Michael B. Zuhl, Director

Ralph E. Becker, Jr., Deputy Director

December 30, 1983

Mr. Norm Stout
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

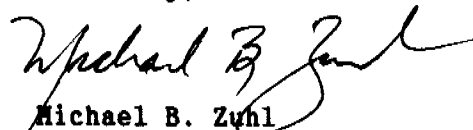
Dear Mr. Stout:

Oil Well Drilling ✓ Ladd Petroleum Corporation -
Denver, Colorado)
State Application Identifier #UT831110-010

The Resource Development Coordinating Committee of the State of Utah has reviewed this proposed action and no comments have been indicated.

Thank you for the opportunity to review and comment on this document. Please address any questions regarding this correspondence to Carolyn Wright (801) 533-4971.

Sincerely,


Michael B. Zuhl
Director

/cw

RECEIVED
DEC 30 1983

DIVISION OF
OIL, GAS & MINING



STATE OF UTAH
NATURAL RESOURCES
Water Rights

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dee C. Hansen, State Engineer

1636 West North Temple • Salt Lake City, UT 84116 • 801-533-6071

January 20, 1984

Ladd Petroleum

C & B Trucking
P.O. Box 1294
Moab, UT 84532

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 01-201 (T59571)

Enclosed is a copy of the above numbered approved Temporary Application. This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire December 20, 1984, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it is with the Area Engineer, Mark Page. The telephone number is (801)637-1303.

Yours truly,

Dee C. Hansen, P. E.
State Engineer

DCH:slm

Enclosure

TEMPORARY



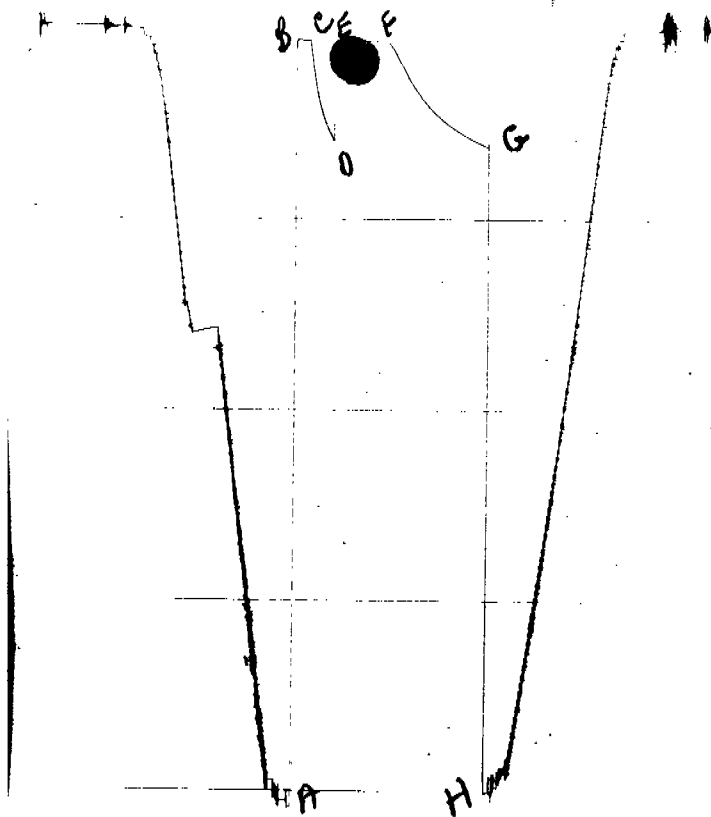
TICKET NO. 71805900
02-MAR-84
FARMINGTON

RECEIVED
MAR 6 1984

DIVISION OF
OIL, GAS & MINING

FORMATION TESTING SERVICE REPORT

LEASE NAME		WELL NO.		TEST NO.		TESTED INTERVAL		LEASE OWNER/COMPANY NAME	
SALT VALLEY		1		1		8320.1 - 8336.1		LAOD PETROLEUM CORPORATION	
LEGAL LOCATION SEC. - TWP. - RNG.		16-24S-20E		FIELD AREA		WILDCAT (MOAB)		COUNTY	
								GRAND	
								STATE	
								UTAH OR	



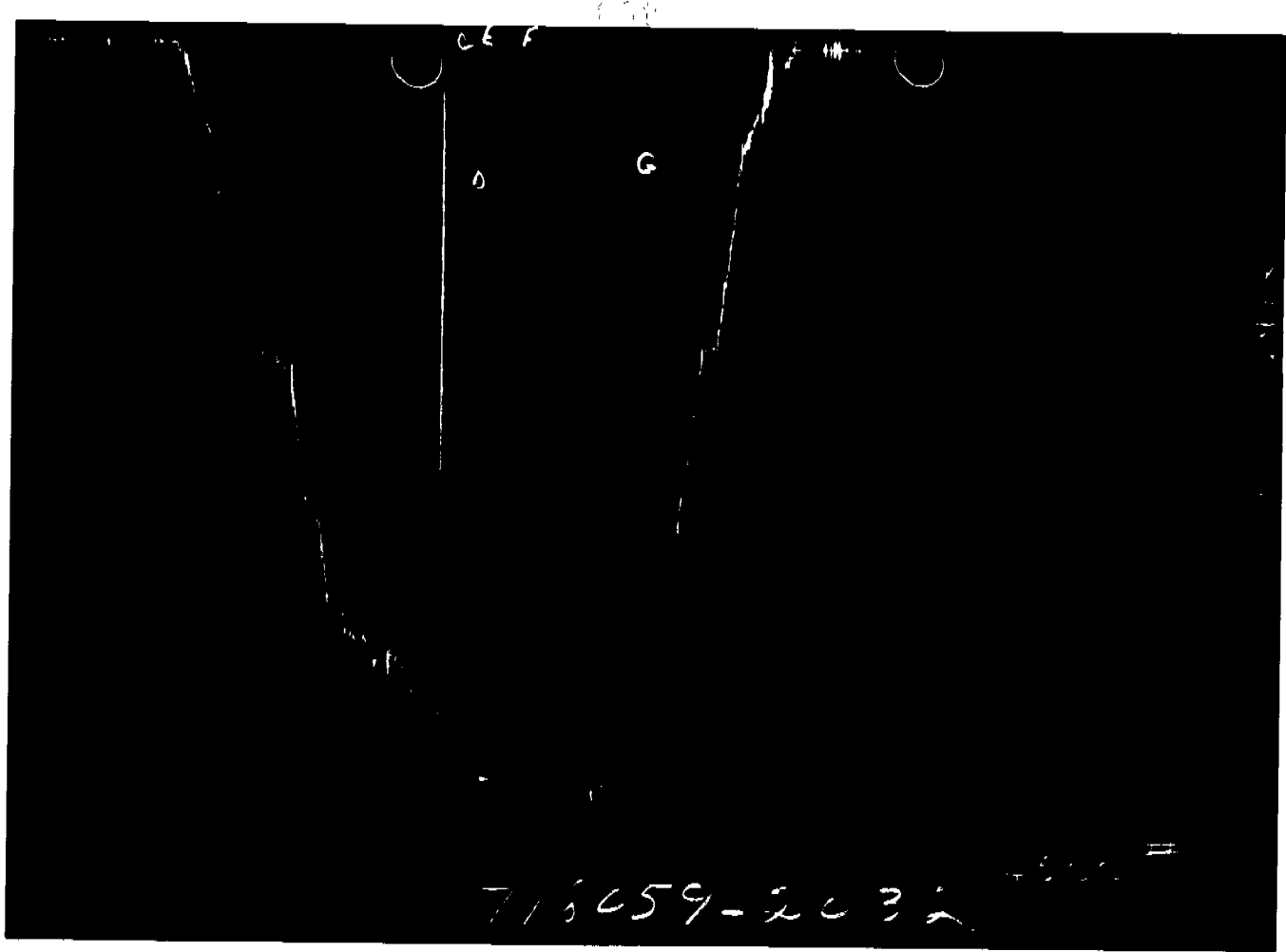
2033 3000 12 24 08

4500 ft

718059-2033

GAUGE NO: 2033 DEPTH: 8333.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4036	4041.7			
B	INITIAL FIRST FLOW	54	64.6	15.0	15.7	F
C	FINAL FIRST FLOW	67	64.6			
C	INITIAL FIRST CLOSED-IN	67	64.6	30.0	28.9	C
D	FINAL FIRST CLOSED-IN	588	585.9			
E	INITIAL SECOND FLOW	67	71.8	60.0	61.2	F
F	FINAL SECOND FLOW	80	71.8			
F	INITIAL SECOND CLOSED-IN	80	71.8	120.0	119.2	C
G	FINAL SECOND CLOSED-IN	627	622.3			
H	FINAL HYDROSTATIC	4004	3989.8			



GAUGE NO: 2032 DEPTH: 8298.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4005	4030.9			
B	INITIAL FIRST FLOW	40	54.4	15.0	15.7	F
C	FINAL FIRST FLOW	53	54.4			
C	INITIAL FIRST CLOSED-IN	53	54.4	30.0	28.9	C
D	FINAL FIRST CLOSED-IN	586	592.1			
E	INITIAL SECOND FLOW	53	60.8	60.0	61.2	F
F	FINAL SECOND FLOW	67	60.8			
F	INITIAL SECOND CLOSED-IN	67	60.8	120.0	119.2	C
G	FINAL SECOND CLOSED-IN	613	619.6			
H	FINAL HYDROSTATIC	3992	3988.8			

EQUIPMENT & HOLE DATA

FORMATION TESTED: UPPER HERMOSA
NET PAY (ft): 7.0
GROSS TESTED FOOTAGE: 16.2
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft): _____
HOLE OR CASING SIZE (in): 12.250
ELEVATION (ft): 4473
TOTAL DEPTH (ft): 8336.0
PACKER DEPTH(S) (ft): 8313, 8320
FINAL SURFACE CHOKE (in): _____
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.20
MUD VISCOSITY (sec): 61
ESTIMATED HOLE TEMP. (°F): 160
ACTUAL HOLE TEMP. (°F): @ ft

TICKET NUMBER: 71805900

DATE: 2-28-84 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP:
FARMINGTON

TESTER: J.L. ROBINSON

WITNESS: K. HAYES

DRILLING CONTRACTOR:
CRC #140

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD PIT	<u>2.620</u> @ <u>89</u> °F	_____ ppm
TOP RECOVERY	<u>1.740</u> @ <u>75</u> °F	_____ ppm
BOTTOM RECOVERY	<u>1.020</u> @ <u>75</u> °F	_____ ppm
SAMPLER	<u>0.720</u> @ <u>75</u> °F	_____ ppm
_____	<u> </u> @ <u> </u> °F	_____ ppm
_____	<u> </u> @ <u> </u> °F	_____ ppm

SAMPLER DATA

Pstg AT SURFACE: 5
cu.ft. OF GAS: 0.00
cc OF OIL: 0
cc OF WATER: 0
cc OF MUD: 2200
TOTAL LIQUID cc: 2200

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

RECOVERED:

100' OF DRILLING MUD

MEASURED FROM
TESTER VALVE

REMARKS:

[illegible]

TICKET NO: 71805900

CLOCK NO: 9756 HOUR: 24



GAUGE NO: 2032

DEPTH: 8298.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	54.4								
C	2	15.7	54.4	0.0							
FIRST CLOSED-IN											
C	1	0.0	54.4								
	2	2.0	144.5	90.1	1.8	0.950					
	3	4.0	224.3	169.9	3.2	0.690					
	4	6.0	288.4	234.0	4.3	0.561					
	5	8.0	335.2	280.8	5.3	0.473					
	6	10.0	377.2	322.8	6.1	0.411					
	7	12.0	410.5	356.1	6.8	0.364					
	8	14.0	449.9	395.5	7.4	0.327					
	9	16.0	470.7	416.3	7.9	0.298					
	10	18.0	498.4	444.0	8.4	0.272					
	11	20.0	518.5	464.1	8.8	0.252					
	12	22.0	539.2	484.8	9.2	0.235					
	13	24.1	558.1	503.7	9.5	0.219					
	14	26.0	573.4	519.0	9.8	0.206					
D	15	28.9	592.1	537.7	10.2	0.189					
SECOND FLOW											
E	1	0.0	60.8								
F	2	61.2	60.8	0.0							
SECOND CLOSED-IN											
F	1	0.0	60.8								
	2	8.0	108.4	47.6	7.2	1.027					
	3	16.0	174.0	113.2	13.2	0.765					
	4	24.0	245.7	184.9	18.3	0.623					
	5	32.0	305.2	244.4	22.6	0.532					
	6	40.0	358.5	297.7	26.3	0.466					
	7	48.0	400.3	339.5	29.6	0.415					
	8	56.0	440.0	379.2	32.4	0.375					
	9	64.0	473.2	412.4	34.9	0.343					
	10	72.0	501.5	440.7	37.2	0.316					
	11	80.0	527.8	467.0	39.2	0.293					
	12	88.0	550.3	489.5	41.0	0.273					
	13	96.0	572.2	511.4	42.7	0.256					
	14	104.0	589.9	529.1	44.2	0.240					
	15	112.0	607.0	546.2	45.6	0.227					
G	16	119.2	619.6	558.8	46.7	0.216					

REMARKS:

TICKET NO: 71805900
CLOCK NO: 12118 HOUR: 24




















GAUGE NO: 2033
DEPTH: 8333.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	64.6			
C 2	15.7	64.6	0.0		
FIRST CLOSED-IN					
C 1	0.0	64.6			
2	2.0	121.8	57.2	1.8	0.950
3	4.0	201.3	136.8	3.2	0.690
4	6.0	264.0	199.5	4.3	0.561
5	8.0	313.1	248.5	5.3	0.474
6	10.0	360.4	295.9	6.1	0.410
7	12.0	397.3	332.8	6.8	0.364
8	14.0	429.9	365.4	7.4	0.327
9	16.0	457.5	392.9	7.9	0.298
10	18.0	485.4	420.9	8.4	0.273
11	20.0	507.7	443.1	8.8	0.252
12	22.0	529.6	465.0	9.2	0.235
13	24.0	547.9	483.3	9.5	0.219
14	26.0	565.3	500.7	9.8	0.205
D 15	28.9	585.9	521.4	10.2	0.189
SECOND FLOW					
E 1	0.0	71.8			
F 2	61.2	71.8	0.0		
SECOND CLOSED-IN					
F 1	0.0	71.8			
2	8.0	119.9	48.1	7.2	1.026
3	16.0	186.4	114.6	13.3	0.763
4	24.0	252.8	181.0	18.3	0.623
5	32.0	311.2	239.4	22.6	0.532
6	40.0	337.7	265.9	26.3	0.466
7	48.0	407.1	335.3	29.6	0.415
8	56.0	445.6	373.8	32.4	0.375
9	64.0	476.2	404.4	34.9	0.343
10	72.0	504.8	433.0	37.2	0.316
11	80.0	530.1	458.3	39.2	0.293
12	88.0	551.9	480.1	41.1	0.273
13	96.0	574.8	503.0	42.7	0.255
14	104.0	591.6	519.9	44.2	0.240
15	112.0	608.1	536.3	45.6	0.227
G 16	119.2	622.3	550.5	46.7	0.216

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	8002.6	
3		DRILL COLLARS.....	8.000	2.300	183.6	
5		CROSSOVER.....	7.750	2.500	1.0	
50		IMPACT REVERSING SUB.....	6.000	2.750	1.0	8187.2
5		CROSSOVER.....	7.750	2.500	1.0	
3		DRILL COLLARS.....	8.000	2.300	95.2	
5		CROSSOVER.....	7.750	2.500	1.0	
13		DUAL CIP SAMPLER.....	5.750	0.870	7.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	8295.9
80		AP RUNNING CASE.....	5.000	2.250	4.1	8298.0
15		JAR.....	5.030	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.9	
70		OPEN HOLE PACKER.....	11.250	1.530	6.0	8312.9
18		DISTRIBUTOR VALVE.....	5.000	1.680	1.7	
70		OPEN HOLE PACKER.....	11.250	1.530	5.3	8319.8
20		FLUSH JOINT ANCHOR.....	5.750	2.870	10.0	
81		BLANKED-OFF RUNNING CASE.....	5.750		4.2	8333.0
TOTAL DEPTH					8336.0	

EQUIPMENT DATA

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. ML 33530
2. NAME OF OPERATOR Ladd Petroleum Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR 830 Denver Club Bldg. Denver, Colo. 80202		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 500' FNL, 2130' FWL (NE NW)		8. FARM OR LEASE NAME Salt Valley
14. PERMIT NO.		9. WELL NO. 1
15. ELEVATIONS (Show whether OP, RT, GR, etc.) 4456' GL		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R. M., OR S.E. AND SURVEY OR AREA Sec. 16-T24S-R20E
		12. COUNTY OR PARISH Grand
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input checked="" type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Operator proposes to plug and abandon as follows:

Plug #	Interval	Cement
1	11,330' (TD)- 11,230'	± 20 sx Class "G"
2	10,560'- 10,460' (bottom of 7 3/4" liner @ 10,510')	± 20 sxs Class "G"
3	8,443'- 8,343' (top of 7 3/4" liner @ 8393')	± 35 sxs Class "G"
4	± 4,050'- ± 3,940' (100' plug across 9 5/8" stub @ ± 4000')	± 50 Sxs Class "G"
5	2,707'- 2,607' (100' plug across base of 13 3/8" csg. @ 2657')	± 70 sx Class "G"
6	25'- 0' (Surface)	± 60 sxs

The abandoned well will be marked with a permanent monument which will be 4" steel pipe 10' in length, set in cement with 4' above GL.
The above procedure was verbally approved by Mr. Ron Firth on 3/30/84.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 4/4/84
BY: [Signature]

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Drilling EngineerDATE 4-4-84

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. ML 33530
2. NAME OF OPERATOR Ladd Petroleum Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR 830 Denver Club Bldg. Denver, Colo. 80221		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 500' FNL, 2130' FWL (NE NW)		8. FARM OR LEASE NAME Salt Valley
14. PERMIT NO.		9. WELL NO. 1
15. ELEVATIONS (Show whether OF, XT, OR, etc.) 4456' GL		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLK. AND SUBSET OR AREA Sec. 16-T24S-R20E
		12. COUNTY OR PARISH Grand
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Operator commenced plugging operations of referenced well on 4/1/84 as follows:

Plug #	Interval	Cement
1	11,330' (TD) - 11,230'	20 sxs Class "H"
2	10,560' - 10,460' (bottom of 7 3/4" liner @ 10,510').	20 sxs Class "H"
3	8,443' - 8,343' (top of 7 3/4" liner @ 8393')	35 sxs Class "H"
4	4,650' - 4,550' (100' plug across 9 5/8" stub @ 4600')	85 sxs Class "H"
5	2,700' - 2,600' (100' plug across base of 13 3/8" csg. @ 2657')	85 sxs Class "H"
6.	25' - Surface	20 sxs Class "H"

A 4" x 10' steel pipe was set in the surface cement with 4' above GL as a permanent well monument. Well Plugged 4/4/84.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 4/4/84
BY: [Signature]

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Drilling EngineerDATE 4-4-84

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> Other <u>P & A</u>				5. LEASE DESIGNATION AND SERIAL NO. ML 33530																									
b. TYPE OF COMPLETION: NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> Other _____				6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A																									
2. NAME OF OPERATOR Ladd Petroleum Corporation				7. UNIT AGREEMENT NAME N/A																									
3. ADDRESS OF OPERATOR 830 Denver Club Bldg. Denver, Colo. 80202				8. FARM OR LEASE NAME Salt Valley																									
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 500' FNL, 2130' FWL (NE NW) At top prod. interval reported below At total depth same				9. WELL NO. 1																									
14. PERMIT NO. <u>43-019-31112</u> DATE ISSUED _____				10. FIELD AND POOL, OR WILDCAT Wildcat																									
15. DATE SPUDDED <u>12-29-83</u> 16. DATE T.D. REACHED <u>3/31/84</u> 17. DATE COMPL. (Ready to prod.) <u>P & A 4-4-84</u> 18. ELEVATIONS (DF, RES, ET, GR, ETC.)* <u>4456' GL</u>				11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 16-T24S-R20E																									
20. TOTAL DEPTH, MD & TVD <u>11,330'</u> 21. PLUG, BACK T.D., MD & TVD <u>P & A 4-4-84</u> 22. IF MULTIPLE COMPL., HOW MANY* _____ 23. INTERVALS DRILLED BY <u>0-11,330'</u>				12. COUNTY OR PARISH Grand																									
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* P & A				13. STATE Utah																									
26. TYPE ELECTRIC AND OTHER LOGS RUN <u>DIL/SFL/GR/CAL, Litho DL/CNL/GR/CAL and BHC/GR/CAL</u>				25. WAS DIRECTIONAL SURVEY MADE Yes																									
27. WAS WELL CORSD No				28. CASING RECORD (Report all strings set in well)																									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>CASING SIZE</th> <th>WEIGHT, LB./FT.</th> <th>DEPTH SET (MD)</th> <th>HOLE SIZE</th> <th>CEMENTING RECORD</th> <th>AMOUNT PULLED</th> </tr> </thead> <tbody> <tr> <td>13 3/8"</td> <td>61# K-55</td> <td>2657</td> <td>17 1/2"</td> <td>1200 sx lite + 300 sx Class H</td> <td></td> </tr> <tr> <td>9 5/8"</td> <td>47, 43.5, 40#</td> <td>8620</td> <td>12 1/4"</td> <td>470 sx Class H + additives</td> <td>4600'</td> </tr> <tr> <td>7 3/4"</td> <td>46 # P 110</td> <td>10,510'-8393'</td> <td>8 1/2"</td> <td>500 sx Class H + additives</td> <td></td> </tr> </tbody> </table>						CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED	13 3/8"	61# K-55	2657	17 1/2"	1200 sx lite + 300 sx Class H		9 5/8"	47, 43.5, 40#	8620	12 1/4"	470 sx Class H + additives	4600'	7 3/4"	46 # P 110	10,510'-8393'	8 1/2"	500 sx Class H + additives	
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED																								
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7 3/4"	46 # P 110	10,510'-8393'	8 1/2"	500 sx Class H + additives																									
29. LINER RECORD																													
SIZE N/A	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)																									
30. TUBING RECORD																													
SIZE N/A	DEPTH SET (MD)	PACKER SET (MD)																											
31. PERFORATION RECORD (Interval, size and number)																													
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.																													
DEPTH INTERVAL (MD)			AMOUNT AND KIND OF MATERIAL USED																										
None																													
33.* PRODUCTION																													
DATE FIRST PRODUCTION None		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)			WELL STATUS (Producing or shut-in) P & A 4-4-84																								
DATE OF TEST None	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.																								
FLOW. TUBING PRESS.		CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.																								
None				WATER—BSL.	OIL GRAVITY-API (CORR.)																								
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) None					TEST WITNESSED BY																								
35. LIST OF ATTACHMENTS Directional Survey (3)																													
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records																													
SIGNED <u>[Signature]</u>		TITLE <u>Drilling Engineer</u>		DATE <u>4-5-84</u>																									

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 10: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF: CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CIRCULATION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES			38. GEOLOGIC MARKERS		
FORMATION	Depth	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Moab- Tongue	754'	DST # 1- Upper Hermosa-8320'-8336'			
Entrada	1,307'	Op: 15, SI 30, Op: 60, SI 120			
Kayenta	2,237'	Recovered 100' mud, 2200 cc mud			
Wingate	2,335'	at 5 psi, BHT: 132°F.			
Chinle	2,618'	Pressures:			
Shinarump	3,176'	IHP: 4036 IFP: 53-67			
Moenkopi	3,544'	FHP: 4004 FFP: 66-80			
Cedar Mesa	4,465'	ISIP: 587 FSIP: 627			
Upper Hermosa	5,258'	DST # 2			
Paradox Salt	6,708'	Leadville 10,768'-10,790'			
Pinkerton Trail	8,673'	Op: 15, SI: 30, Op: 60, SI: 120			
Molas	10,364'	Recovered 920' G & MCW, 7100'			
Leadville	10,476'	GCW, 1400 cc water @ 20 psi.			
Ouray	10,496'	BHT: 168°F			
Elbert	11,032'	Pressures:			
McCracken	11,163'	IHP: 4839 IFP: 213-1533			
Aneth	11,222'	FHP: 4839 FFP: 1533-3610			
T.D.	11,264'	ISIP: 4796			
	11,330'	FSIP: 4754			

LADD PETROLEUM CORPORATION

830 Denver Club Building
Denver, Colorado 80202
Telephone (303) 620-0100

RECEIVED

APR 9 1984

April 6, 1984

DIVISION OF
OIL, GAS & MINING

Division of Oil, Gas & Mining
4241 State Office Bldg.
Salt Lake City, Utah 84114

Re: Salt Valley # 1
Grand County, Utah

Dear Sir:

Please find enclosed form for : Notice of intention to abandon well",
"Notice of abandonment, and Plugging report, directional survey & copy of
drilling report.

If any further information is required please call.

Sincerely,



J. E. Myers
Drilling Engineer

JEM/ead

cc: CEP,

Rt: SDG, WF

RECEIVED

APR 9 1934

DIVISION OF \
OIL, GAS & MINING

AMF/SCIENTIFIC DRILLING
76 FREEDOM LA. # 6 EVANSTON WYO.

GYROSCOPIC DIRECTIONAL SURVEY
FOR

* LADD PETROLEUM *

JOB NUMBER: MSRG/RFL/142/3034

WELL NAME: SALT VALLEY # 1

LOCATION: GRAND CO. UTAH

SURVEY DATE: 03/31/84

SURVEY ENGINEER: R.F. LAMPERT

SURVEY IS REFERENCED TO TRUE NORTH

GYRO REFERENCE BEARING: S36-DDW

METHOD OF CALCULATION: MINIMUM CURVATURE

LAT/DEP CALCULATED FROM SLOT

VERTICAL SECTION CALCULATED FROM SLOT

DEPTH MEASURED IN FEET

COMMENTS:

*THIS SURVEY IS CORRECT TO THE *
*BEST OF MY KNOWLEDGE AND IS *
SUPPORTED BY ACTUAL FIELD DATA.
*
* *R.F. Lampert* *
* ***** *
* COMPANY REPRESENTATIVE *

AMF/SCIENTIFIC DRILLING
76 FREEDOM LA. # 6 EVANSTON WYO.

JOB NUMBER: MSRG/RFL/142/3034

DATE: 03/31/84

INRUN SURVEY

BY

THE MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100	STATION DISTANCE	DISPLACEMENT BEARING
100.0	100.00	-0.14	0.15	00-10	N 51-51 E	0.09 N 0.11 E	0.17	0.15	AT N 51-51 E
200.0	200.00	-0.33	0.23	00-06	S 85-08 E	0.17 N 0.32 E	0.12	0.36	AT N 61-23 E
300.0	300.00	-0.52	0.23	00-10	N 39-43 E	0.28 N 0.50 E	0.14	0.57	AT N 60-49 E
400.0	400.00	-0.79	0.28	00-09	N 44-29 E	0.48 N 0.68 E	0.02	0.83	AT N 54-41 E
500.0	500.00	-0.98	0.19	00-04	N 29-15 E	0.63 N 0.80 E	0.09	1.02	AT N 51-58 E
600.0	600.00	-1.10	0.12	00-04	N 46-54 E	0.72 N 0.87 E	0.02	1.13	AT N 50-34 E
700.0	700.00	-1.24	0.16	00-07	N 66-22 E	0.80 N 1.01 E	0.06	1.28	AT N 51-38 E
800.0	800.00	-1.42	0.19	00-06	N 41-02 E	0.90 N 1.16 E	0.05	1.47	AT N 52-01 E
900.0	900.00	-1.64	0.25	00-11	N 69-56 E	1.02 N 1.37 E	0.11	1.71	AT N 53-07 E
1000.0	1000.00	-1.89	0.28	00-08	N 30-14 E	1.18 N 1.57 E	0.12	1.97	AT N 53-09 E
1100.0	1100.00	-2.04	0.19	00-05	S 80-41 E	1.27 N 1.70 E	0.13	2.12	AT N 53-20 E
1200.0	1200.00	-2.07	0.10	00-02	S 47-25 E	1.24 N 1.80 E	0.06	2.18	AT N 55-28 E
1300.0	1300.00	-1.97	0.13	00-07	S 30-46 W	1.13 N 1.77 E	0.11	2.10	AT N 57-24 E
1400.0	1400.00	-1.87	0.15	00-03	S 57-39 E	1.02 N 1.75 E	0.13	2.03	AT N 59-48 E
1500.0	1500.00	-1.82	0.15	00-07	N 83-15 W	1.01 N 1.69 E	0.16	1.97	AT N 59-09 E
1600.0	1600.00	-1.76	0.26	00-11	N 54-58 W	1.11 N 1.46 E	0.10	1.83	AT N 52-38 E
1700.0	1700.00	-1.76	0.36	00-14	N 52-23 W	1.33 N 1.16 E	0.05	1.77	AT N 41-13 E
1800.0	1800.00	-1.82	0.45	00-17	N 40-30 W	1.64 N 0.84 E	0.07	1.84	AT N 27-09 E
1900.0	1899.99	-1.86	0.58	00-23	N 53-42 W	2.03 N 0.41 E	0.13	2.07	AT N 11-28 E
2000.0	1999.99	-1.96	0.74	00-28	N 36-28 W	2.54 N 0.11 W	0.14	2.55	AT N 02-31 W
2100.0	2099.99	-2.13	0.87	00-32	N 44-15 W	3.20 N 0.69 W	0.08	3.27	AT N 12-11 W

AMF/SCIENTIFIC DRILLING
76 FREEDOM LA. # 6 EVANSTON WYO.

JOB NUMBER: MSRG/RFL/142/3034

DATE: 03/31/84

INRUN SURVEY

BY

THE MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE		D-LEG PER 100	STATION DISTANCE	DISPLACEMENT BEARING
2200.0	2199.98	-2.37	1.06	00-41	N 36-44 W	4.01 N	1.37 W	0.17	4.23 AT N 18-54 W	
2300.0	2299.97	-2.62	1.16	00-39	N 44-20 W	4.89 N	2.12 W	0.09	5.33 AT N 23-29 W	
2400.0	2399.97	-2.95	1.11	00-37	N 25-12 W	5.78 N	2.75 W	0.21	6.40 AT N 25-26 W	
2500.0	2499.96	-3.46	1.12	00-40	N 26-44 W	6.79 N	3.24 W	0.05	7.52 AT N 25-31 W	
2600.0	2599.96	-4.04	1.21	00-43	N 21-21 W	7.89 N	3.73 W	0.08	8.73 AT N 25-18 W	
2700.0	2699.95	-4.68	1.27	00-44	N 23-44 W	9.06 N	4.22 W	0.03	9.99 AT N 24-57 W	
2800.0	2799.94	-5.37	1.35	00-49	N 21-11 W	10.31 N	4.73 W	0.09	11.34 AT N 24-39 W	
2900.0	2899.93	-6.09	1.40	00-47	N 22-01 W	11.61 N	5.24 W	0.04	12.74 AT N 24-19 W	
3000.0	2999.92	-6.91	1.35	00-46	N 08-57 W	12.90 N	5.60 W	0.18	14.07 AT N 23-29 W	
3100.0	3099.91	-8.00	1.43	00-52	N 03-36 E	14.32 N	5.66 W	0.20	15.40 AT N 21-34 W	
3200.0	3199.90	-9.28	1.47	00-49	N 13-43 E	15.77 N	5.44 W	0.16	16.68 AT N 19-03 W	
3300.0	3299.89	-10.70	1.53	00-56	N 17-02 E	17.24 N	5.04 W	0.13	17.96 AT N 16-17 W	
3400.0	3399.87	-12.30	1.67	00-59	N 22-52 E	18.81 N	4.47 W	0.11	19.33 AT N 13-21 W	
3500.0	3499.86	-14.00	1.75	01-01	N 25-29 E	20.40 N	3.75 W	0.06	20.74 AT N 10-25 W	
3600.0	3599.84	-15.78	1.82	01-04	N 26-21 E	22.03 N	2.96 W	0.05	22.23 AT N 07-38 W	
3700.0	3699.82	-17.55	1.79	00-59	N 29-58 E	23.61 N	2.11 W	0.11	23.70 AT N 05-07 W	
3800.0	3799.81	-19.13	1.60	00-51	N 27-18 E	25.01 N	1.34 W	0.14	25.05 AT N 03-05 W	
3900.0	3899.80	-20.59	1.47	00-50	N 35-47 E	26.26 N	0.58 W	0.13	26.27 AT N 01-16 W	
4000.0	3999.79	-22.14	1.56	00-57	N 31-57 E	27.55 N	0.28 E	0.13	27.56 AT N 00-36 E	
4100.0	4099.77	-23.90	1.76	01-04	N 41-48 E	28.95 N	1.34 E	0.21	28.98 AT N 02-39 E	
4200.0	4199.75	-25.92	2.04	01-16	N 43-46 E	30.44 N	2.73 E	0.20	30.57 AT N 05-07 E	

AMF/SCIENTIFIC DRILLING
76 FREEDOM LA. # 6 EVANSTON WYO.

JOB NUMBER: MSR6/RFL/142/3034

DATE: 03/31/84

INRUN SURVEY

BY

THE MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100	STATION DISTANCE	DISPLACEMENT BEARING
4300.0	4299.71	-28.86	3.01	02-11	N 52-24 E	32.40 N 5.00 E	0.95	32.79 AT N 08-47 E	
4400.0	4399.62	-32.66	4.07	02-29	N 61-42 E	34.59 N 8.42 E	0.48	35.60 AT N 13-41 E	
4500.0	4499.54	-36.44	4.20	02-20	N 64-46 E	36.49 N 12.17 E	0.20	38.46 AT N 18-27 E	
4600.0	4599.46	-39.79	3.77	01-59	N 63-43 E	38.12 N 15.56 E	0.35	41.18 AT N 22-12 E	
4700.0	4699.41	-42.63	3.24	01-44	N 68-05 E	39.45 N 18.52 E	0.29	43.58 AT N 25-08 E	
4800.0	4799.37	-45.10	2.91	01-36	N 70-30 E	40.48 N 21.23 E	0.15	45.72 AT N 27-41 E	
4900.0	4899.33	-47.31	2.68	01-28	N 72-25 E	41.34 N 23.77 E	0.14	47.68 AT N 29-54 E	
5000.0	4999.30	-49.25	2.49	01-23	N 78-54 E	41.96 N 26.18 E	0.18	49.45 AT N 31-58 E	
5100.0	5099.28	-50.90	2.33	01-17	N 85-17 E	42.28 N 28.48 E	0.18	50.98 AT N 33-58 E	
5200.0	5199.25	-52.22	2.15	01-11	S 86-49 E	42.32 N 30.62 E	0.20	52.23 AT N 35-54 E	
5300.0	5299.23	-53.14	1.93	01-02	S 75-22 E	42.03 N 32.53 E	0.27	53.15 AT N 37-44 E	
5400.0	5399.22	-53.66	1.67	00-53	S 66-01 E	41.49 N 34.10 E	0.22	53.71 AT N 39-25 E	
5500.0	5499.21	-53.99	1.48	00-49	S 65-27 E	40.88 N 35.46 E	0.07	54.11 AT N 40-56 E	
5600.0	5599.20	-54.15	1.40	00-47	S 53-07 E	40.17 N 36.65 E	0.17	54.38 AT N 42-22 E	
5700.0	5699.19	-54.09	1.37	00-47	S 47-21 E	39.30 N 37.70 E	0.08	54.46 AT N 43-49 E	
5800.0	5799.18	-53.74	1.53	00-58	S 33-14 E	38.13 N 38.67 E	0.28	54.30 AT N 45-24 E	
5900.0	5899.16	-53.00	1.69	00-58	S 20-15 E	36.63 N 39.42 E	0.22	53.81 AT N 47-06 E	
6000.0	5999.15	-51.91	1.88	01-11	S 15-01 E	34.84 N 39.98 E	0.24	53.03 AT N 48-56 E	
6100.0	6099.12	-50.44	2.23	01-22	S 08-03 E	32.67 N 40.41 E	0.24	51.96 AT N 51-03 E	
6200.0	6199.09	-48.66	2.43	01-25	S 03-19 E	30.25 N 40.65 E	0.13	50.67 AT N 53-21 E	
6300.0	6299.06	-46.59	2.65	01-37	S 00-05 E	27.61 N 40.73 E	0.22	49.20 AT N 55-52 E	

AMF/SCIENTIFIC DRILLING
76 FREEDOM LA. # 6 EVANSTON WYO.

JOB NUMBER: MSRG/RFL/142/3034

DATE: 03/31/84

INRUN SURVEY

BY

THE MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100	STATION DISTANCE	DISPLACEMENT BEARING
6400.0	6399.01	-44.06	3.04	01-52	S 06-50 W	24.58 N 40.53 E	0.33	47.40	AT N 58-46 E
6500.0	6498.95	-40.92	3.61	02-16	S 08-27 W	21.01 N 40.05 E	0.40	45.22	AT N 62-19 E
6600.0	6598.86	-37.15	4.23	02-35	S 11-37 W	16.84 N 39.30 E	0.34	42.76	AT N 66-48 E
6700.0	6698.73	-32.57	5.02	03-10	S 14-21 W	11.96 N 38.17 E	0.60	40.00	AT N 72-36 E
6800.0	6798.56	-27.13	5.83	03-31	S 17-45 W	6.36 N 36.55 E	0.40	37.10	AT N 80-07 E
6900.0	6898.36	-21.06	6.34	03-45	S 23-01 W	0.43 N 34.33 E	0.41	34.34	AT N 89-17 E
7000.0	6998.13	-14.52	6.76	04-00	S 22-34 W	5.80 S 31.72 E	0.25	32.24	AT S 79-38 E
7100.0	7097.88	-7.63	7.11	04-09	S 23-28 W	12.34 S 28.94 E	0.16	31.46	AT S 66-54 E
7200.0	7197.60	-0.35	7.40	04-20	S 30-50 W	18.90 S 25.56 E	0.57	31.79	AT S 53-31 E
7300.0	7297.32	7.16	7.54	04-19	S 34-42 W	25.24 S 21.48 E	0.29	33.14	AT S 40-24 E
7400.0	7397.03	14.76	7.61	04-25	S 33-30 W	31.54 S 17.21 E	0.14	35.93	AT S 28-37 E
7500.0	7496.70	22.86	8.11	04-53	S 35-27 W	38.22 S 12.62 E	0.49	40.25	AT S 18-16 E
7600.0	7596.33	31.48	8.63	05-01	S 41-31 W	44.96 S 7.25 E	0.54	45.55	AT S 09-10 E
7700.0	7695.96	39.98	8.53	04-46	S 40-07 W	51.42 S 1.68 E	0.28	51.44	AT S 01-52 E
7800.0	7795.63	48.10	8.12	04-33	S 39-49 W	57.64 S 3.54 W	0.22	57.75	AT S 03-31 W
7900.0	7895.34	55.78	7.69	04-16	S 38-08 W	63.61 S 8.38 W	0.31	64.16	AT S 07-30 W
8000.0	7995.07	63.12	7.35	04-10	S 40-42 W	69.29 S 13.04 W	0.21	70.51	AT S 10-40 W
8100.0	8094.79	70.51	7.40	04-19	S 40-07 W	74.93 S 17.84 W	0.16	77.02	AT S 13-23 W
8200.0	8194.50	78.11	7.61	04-25	S 38-16 W	80.83 S 22.65 W	0.17	83.94	AT S 15-39 W
8300.0	8294.21	85.83	7.72	04-26	S 37-32 W	86.91 S 27.39 W	0.06	91.13	AT S 17-29 W
8400.0	8393.92	93.38	7.56	04-14	S 36-59 W	92.93 S 31.96 W	0.20	98.27	AT S 18-59 W

AMF/SCIENTIFIC DRILLING
76 FREEDOM LA. # 6 EVANSTON WYO.

JOB NUMBER: MSR6/RFL/142/3034

DATE: 03/31/84

INRUN SURVEY

BY

THE MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100	STATION DISTANCE	DISPLACEMENT BEARING
8500.0	8493.63	100.98	7.60	04-29	S 36-31 W	99.02 S 36.51 W	0.25	105.53	AT S 20-14 W
8600.0	8593.33	108.71	7.73	04-23	S 33-36 W	105.34 S 40.95 W	0.25	113.02	AT S 21-15 W
8700.0	8693.06	116.06	7.37	04-04	S 32-59 W	111.50 S 44.99 W	0.32	120.23	AT S 21-59 W
8800.0	8792.81	123.07	7.02	03-59	S 37-10 W	117.24 S 49.02 W	0.31	127.08	AT S 22-42 W
8900.0	8892.58	129.82	6.77	03-47	S 43-28 W	122.40 S 53.39 W	0.47	133.54	AT S 23-34 W
9000.0	8992.39	135.95	6.19	03-19	S 46-46 W	126.78 S 57.77 W	0.51	139.32	AT S 24-30 W
9100.0	9092.24	141.43	5.57	03-04	S 47-20 W	130.57 S 61.84 W	0.25	144.48	AT S 25-21 W
9200.0	9192.09	146.79	5.48	03-13	S 51-04 W	134.15 S 65.99 W	0.25	149.50	AT S 26-12 W
9300.0	9291.92	152.43	5.83	03-28	S 52-19 W	137.76 S 70.57 W	0.26	154.78	AT S 27-07 W
9400.0	9391.72	158.45	6.24	03-41	S 51-57 W	141.59 S 75.49 W	0.22	160.45	AT S 28-04 W
9500.0	9491.50	164.85	6.64	03-56	S 53-31 W	145.61 S 80.78 W	0.27	166.51	AT S 29-01 W
9600.0	9591.26	171.56	6.98	04-04	S 52-23 W	149.81 S 86.34 W	0.16	172.91	AT S 29-57 W
9700.0	9691.01	178.36	7.06	04-02	S 53-08 W	154.08 S 91.97 W	0.06	179.44	AT S 30-50 W
9800.0	9790.76	185.09	7.05	04-03	S 55-53 W	158.17 S 97.70 W	0.19	185.92	AT S 31-42 W
9900.0	9890.51	191.77	7.08	04-04	S 56-37 W	162.11 S 103.59 W	0.05	192.38	AT S 32-35 W
10000.0	9990.25	198.49	7.15	04-08	S 57-48 W	165.98 S 109.60 W	0.11	198.90	AT S 33-26 W
10100.0	10090.00	204.98	7.08	03-59	S 62-57 W	169.48 S 115.74 W	0.39	205.23	AT S 34-20 W
10200.0	10189.74	211.46	7.16	04-14	S 61-49 W	172.80 S 122.09 W	0.26	211.58	AT S 35-15 W
10300.0	10289.47	218.30	7.41	04-16	S 57-41 W	176.53 S 128.49 W	0.31	218.34	AT S 36-03 W
10400.0	10389.21	225.14	7.24	04-02	S 54-23 W	180.57 S 134.49 W	0.33	225.15	AT S 36-41 W
10480.0	10469.02	230.38	5.52	03-53	S 56-44 W	183.69 S 139.04 W	0.28	230.38	AT S 37-07 W

THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF

10480.0 FEET EQUALS 230.38 FEET AT S 37-07 W

LADD PETROLEUM
SALT VALLEY FED. #1
SEC16-T24S-R20E
GRAND COUNTY, UTAH

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APR 18 1984

DIVISION OF OIL
GAS & MINING

SMITH MUD LOGGING
352 2275 ROAD
DELTA, COLORADO 81416
Ph: (303) 874-7451

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(1) COPY, FINAL MUD LOG (5"=100')

SERVICE CONTRACTOR LIST

DRILLING CONTRACTOR: COLORADO WELL SERVICE
RANGLEY COLORADO

DRILLING FOREMAN: Mr. Kenneth Hayes
Mr. John Gordon
Grand Junction Colorado

PUSHER: Mr. J.E. Findlay
Colorado Well Service

GEO-TECHNOLOGISTS: Mr. Louis Camp
Mr. Tim Ruzin
Mr. Paul Smith
Mr. Eric Nielson
Mr. Don Wicburg
SMITH MUD LOGGING
DELTA, COLORADO

DRILLING FLUID: Mr. John Dimochowski
Mr. Ken Ballard
Imco Services
Moab, Utah

WIRE LINE LOGS: Mr. George Bain
Mr. Karl Schwarzenegger
Mr. Tom Link
Schlumberger-Farmington N.M.

GEOLOGIST: Mr. L. Prendergast
Consultant-Grand Junction Colo.

DRILL STEM TESTING: Mr. J.L. Robinson
Mr. Howard Bell
Halliburton-Farmington, N.M.

LADD PETROLEUM
SALT VALLEY FEDERAL #1
NENW SEC 16-T24S-R20E
GRAND COUNTY, UTAH

SUMMARY OF DAILY ACTIVITY

DATE	ACTIVITY	MIDNITE 24 HOUR DEPTH FOOTAGE
01-11-84	Unit #1644 on location	
01-12-84	Monitor carbide for co. man	
01-13-84	Running 13 3/8 csg-woc-nipple up	
01-14-84	Nipple up-pressure test	
01-15-84	Pressure testing-hung up plug	
01-16-84	Pressure testing-chk collars-drng cmt	2688
01-17-84	Drilling-trip for bit #8-junk in hole	2910
01-18-84	Drill on junk-trip for magnet-yo-yo mill tooth and magnet	2910
01-19-84	Yo-yo mill tooth and magnet	2910
01-20-84	Yo-yo as above-	2910
01-21-84	Mud loggers on standby	2910
01-22-84	Mud loggers on standby	2910
01-23-84	Drilling with air	3950
01-24-84	Drilling	4561
01-25-84	Drilling	
01-26-84	Drilling-work on rotating head-water flow-toh to mud up	4726
01-27-84	Tih drilling w/mud	4875
01-28-84	Drilling	5043
01-29-84	Drill toh for bit#11	5163
01-30-84	Drill toh for hole in pipe	5192
01-31-84	Drill	5400
02-01-84	Drill	5659
02-02-84	Drill	5857
02-03-84	Drill-work on pumps	6033
02-04-84	Drill trip for bit #12	6138
02-05-84	Tripping-drill	6330
02-06-84	Drill-begin H2S detection	6526

SUMMARY OF DAILY ACTIVITY

(CONTINUED)

DATE	ACTIVITY	MIDNITE DEPTH	24 HOUR FOOTAGE
02-07-84	Drill	6727	201
02-08-84	Drill	6863	136
02-09-84	Drill	6998	135
02-10-84	Drill work on pump-toh ck collars	7054	56
02-11-84	Tih with bit #13-ream to btm-drill	7163	109
02-12-84	Drill-toh chng bha-correct depth (-17 ft)	7198	35
02-13-84	Drill	7295	97
02-14-84	Drill	7435	140
02-15-84	Drill	7523	88
02-16-84	Drill (reduced weight)	7594	71
02-17-84	Drill-trip for bit #14	7623	29
02-18-84	Drill	7701	78
02-19-84	Drill	7798	97
02-20-84	Drill	7872	74
02-21-84	Drill-trip for bit #15	7931	59
02-22-84	Drill	8029	98
02-23-84	Drill-trip for bit #16-chng bha	8093	64
02-24-84	Tripping-drill	8182	89
02-25-84	Drill	8256	74
02-26-84	Drill-trip for bit #17-work on rig	8277	21
02-27-84	Drill-circ smples-toh for dst #1	8336	59
02-28-84	Dst #1-tih-drill	8338	2
02-29-84	Drill	8457	119
03-01-84	Drill	8584	127
03-02-84	Drill	8715	131
03-03-84	Drill-circ smples-toh for logs	8763	48
03-04-84	Run e-logs (schlumberger)	8763	0

SUMMARY OF DAILY ACTIVITY
(CONTINUED)

DATE	ACTIVITY	MIDNITE 24 HOUR DEPTH	FOOTAGE
03-05-84	Mud loggers on standby-running e-logs	8763	0
03-06-84	Mud loggers on standby-running e-logs	8763	0
03-07-84	Monitor carbide-tih bit #18	8763	0
03-08-84	Drill	8917	154
03-09-84	Drill-trip for bit #19	9033	116
03-10-84	Drill	9341	308
03-11-84	Drill	9579	238
03-12-84	Drill	9720	141
03-13-84	Drill	10017	297
03-14-84	Drill	10318	301
03-15-84	Drill	10457	139
03-16-84	Drill-trip for bit #20	10501	43
03-17-84	Drill-circ for e-logs	10520	19
03-18-84	Run e-logs-schlumberger	10520	0
03-19-84	Circ-run and cmt liner	10520	0
03-20-84	Woc-lay dn pipe	10520	0
03-21-84	Drill out	10528	8
03-22-84	Drill	10603	75
03-23-84	Drill-trip for bit#22-change rotating head	10662	59
03-24-84	Drill-trip for DST #2	10790	126
03-25-84	Run DST	10790	0
03-26-84	Drill	10947	157
03-27-84	Drill trip for bit#23	11030	30
03-28-84	Drill	11170	147
03-29-84	Drill	11267	77
03-30-84	Drill-ID CIRC RUN LOGS-MUD LOGGING UNIT RELEASED *AS OF 12:00 MIDNIGHT*11330		

LADD PETROLEUM
SALT VALLEY FEDERAL #1
NENW SEC 16-T24S-R20E
GRAND COUNTY, UTAH

BIT RECORD

BIT#	MAKE	SIZE	TYPE	DEPTH OUT	FOOTAGE USED	HOURS
1	STC	12 1/2	F-1	1257	1257	53 1/2
2	HTC	12 1/4	J-33	1869	612	27
3	HTC	12 1/4	J-33	2683	814	51 1/2
4	SEC	17 1/2	HO	929	869	37 1/2
5	SEC	17 1/2	HO	2653	1724	84
6	HTC	12 1/4	J-4	2688	5	
7	STC	12 1/4	F-3	2910	222	9 1/2
8	HTC	12 1/4	J-4 RR#6	2943	33	3
9	SEC	12 1/4	GM88	4726	1783	53
10	HTC	12 1/4	J-33	5133	407	54
11	STC	12 1/4	F-4	6138	1005	110
12	STC	12 1/4	F-4	7054	916	125
13	STC	12 1/4	F-3	7603	549	121
14	HTC	12 1/4	J-44	7872	269	74 1/2
15	HTC	12 1/4	J-55R	8093	221	51
16	STC	12 1/4	F-57	8277	184	50
17	HTC	12 1/4	J-44	8763	486	73 1/2
18	STC	8 1/2	V2HJ	9033	270	32 1/2
19	STC	8 1/2	F-2	10483	1450	143
20	HTC	8 1/2	J-33	10510	27	
21	HTC	6 1/2	J-3	10620	110	37
22	HTC	6 1/2	J-44	11028	408	61
23	STC	6 1/2	F-4	11330	302	

LADD PETROLEUM
SALT VALLEY FEDERAL #1
NENW SEC 16-T24S-R20E
GRAND COUNTY, UTAH

DEVIATION RECORD SHEET

<u>DEPTH</u>	<u>DEVIATION(Deg)</u>
70	1/4
136	1/4
260	1/4
412	1/4
595	1/2
810	1/2
1108	1
1235	1/2
1325	0
1447	0
1571	1/2
1840	3/4
1996	3/4
2180	1 1/4
2273	3/4
2427	1/4
2580	1/2
2994	1
3383	1
3672	1/2
3979	1/4
4194	1/4
4499	2 1/4
4591	1 3/4
4814	1 1/4
4905	1 1/2
5031	1 1/4
5123	1 1/4
5273	1 1/2
5424	1 1/4
5576	1/2
5666	3/4
5909	1
6032	1 1/4
6128	2
6249	2
6408	1 1/2
6535	2 1/4
6692	2 3/4
6851	3 1/2
7011	3 1/2
7041	3 3/4
7168	4 3/4

LADD PETROLEUM

SALT VALLEY FEDERAL #1

NWNE SEC 16-T24S-R20E

GRAND COUNTY, UTAH

DEVIATION RECORD SHEET

(CONTINUED)

DEPTH	DEVIATION (Deg)
7245	4 1/2
7310	4 1/2
7372	4 1/4
7436	4 1/2
7500	4 3/4
7561	5 3/4
7563	6
7593	5 3/4
7609	6
7641	5 1/4
7704	5
7764	5
7831	5
7872	4 1/4
7896	4 3/4
7959	4
8023	3 3/4
8085	4 1/4
8110	3 3/4
8170	4
8260	4 1/4
8349	4
8476	3 3/4
8635	4 1/4
8893	4 1/4
9023	3 3/4
9118	3 1/2
9276	4 3/4
9436	4 1/4
9595	4 1/4
9785	4 1/4
9943	4 1/2
10102	4 1/4
10259	4 1/4
10447	4
10568	4 1/4
10727	4
10805	4

SMITH MUD LOGGING

DST & SHOW SHEET

SHOW #2 INTERVAL: 10772 TO: 10796
 COMPANY: LADD PETROLEUM
 WELL: SALT VALLEY FEDERAL #1
 FIELD: WILDCAT

DATE: 3-24-84

	BEFORE SHOW	DURING SHOW	AFTER SHOW
DRILLING RATE	7-8 min/ft	2-4 min/ft	4-9 min/ft
TOTAL GAS UNITS	4	7 +	1-2
% METHANE	0.004	0.005	0.004
% ETHANE		0.0	
% PROPANE		0.0	
% BUTANE (ISO)		0.0	
% BUTANE (NORM)		0.0	
% PENTANES			

SAMPLE LITHOLOGY: ls-wh/ltgy fxln to hd dolmic fluo=19% of smple
 SAMPLE FLUO-CUT: fr slo fggy-strong pl ylo cut

DAT #2	INTERVAL	TIME min.	PRESSURE (psi)	
			top chart	bottom chart
INITIAL HYDROSTATIC			4828.0	4836
INITIAL open	15	from: ? to: 1299.6	from: 213.7 to: 1299.6	
INITIAL SHUT-IN	30	to: 4742.0	to: 4796.7	
SECOND open	60	from: 1515.1 to: 3537.7	from: 1515.1 to: 3537.7	
SECOND SHUT-IN	120	to: 4828	to: 4754.3	
FINAL HYDROSTATIC			4828	4836

DHT (F.): 168

1ST FLOW:

2ND FLOW:

REMARKS:

DRILL PIPE RECOVERY: 8020" DM & SL GC SALT WATER

SAMPLE CHAMBER REC.: 1400 CC SW AT 20 PSI

GEO-TECHNOLOGIST: MR. RUZIN

SMITH MUD LOGGING

DST & SHOW SHEET

SHOW #1 INTERVAL: 8330 TO: 8338
 COMPANY: LADD PETROLEUM
 WELL: SALT VALLEY FEDERAL #1
 FIELD: WILDCAT

DATE: 2-27-84

	BEFORE SHOW	DURING SHOW	AFTER SHOW
DRILLING RATE	27 min/ft	4 min/ft	9 min/ft
TOTAL GAS UNITS	9	11	9
%METHANE	0.018	.022	.021
%ETHANE		0.0	
%PROPANE		0.0	
%BUTANE (ISO)		0.0	
%BUTANE (NORM)		0.0	
%PENTANES			

SAMPLE LITHOLOGY: 60% ss-lt-dkgy vlg slty pcon : 30% ls tn wnt s+t
 Colmct: 10% anhy wht sft vfri
 SAMPLE FLUD-CUT: dkgn fluo sl ct wt w/gd ct in 10-20% dry smple

DST #1	INTERVAL: 8320	TO: 8336	DATE: 2-27-84
	TIME min.	top chart	PRESSURE (psi) bottom chart
INITIAL HYDROSTATIC		4036.2	4005.3
INITIAL OPEN	15	from: 53.5 to: 66.9	from: 40.0 to: 53.4
INITIAL SHUT-IN	30	to: 587.6	to: 580
SECOND OPEN	60	from: 66.9 to: 80.3	from: 53.4 to: 61.7
SECOND SHUT-IN	120	to: 627.4	to: 612.5
FINAL HYDROSTATIC		4004.1	3992

DHT (F.):

1ST FLOW:

2ND FLOW:

REMARKS:

DRILL PIPE RECOVERY: 100 FT/ DRILLING MUD

SAMPLE CHAMBER REC.: 5 PSI GAS-2200 CC DRILLING MUD

LOG-TECHNOLOGIST: MR. TIM RUZIN

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

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MAY 11 1984

DIVISION OF OIL
GAS & MINING

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Salt Valley # 1 API No. 43-019-31112
Operator Ladd Petroleum Corporation Address 830 Denver Club Bldg. Denver, Colo. 80202
Contractor CRC Colorado Well Inc. (#140) Address 2603 E. Main St. Rangely, Colo. 81648
Location NE 1/4 NW 1/4 Sec. 16 T. 24S R. 20E County Grand

Water Sands

	<u>Depth</u> (Approx) Feet From To	<u>Volume</u> (Approx) bbl/hr. Flow Rate or Head	<u>Quality</u> Fresh or Salty
1.	<u>800'-900'</u>	<u>100-225</u>	<u>Fresh</u>
2.	<u>4660'-4750</u>	<u>200</u>	<u>Fresh</u>
3.			
4.			
5.			

(Continue of reverse side if necessary)

Formation Tops

Unknown

Remarks

Air drilling when water flows encountered. Water flows killed when mudded up.
No samples taken.

NOTE: (a) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.

(b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

010998

P-A
4/84

UTAH STATE Pk
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

INSPECTION RECORD - ABANDONMENT

Date 3-4 Apr 84 2200-0030
Location (T-R-S) NENW Sec 16 T24S R20E
Field Area Wildcat
County Grand
State _____
Inspector deGruyter

WELL NAME Salt Valley #1 31112
Operator Ladd Petroleum
Contractor & Rig CEC Rig #140
Lease Number ML 33530 State
Type of Well* Dry Hole
INC Issued _____

	YES	NO	
1. Plugs spotted across perforations if casing set?			N/A
2. Plugs spotted at casing stubs?	<input checked="" type="checkbox"/>		
3. Open hole plugs spotted as specified?	<input checked="" type="checkbox"/>		
4. Retainers, bridge plugs, or packers set as specified?			N/A
5. Cement quantities as specified?	<input checked="" type="checkbox"/>		
6. Method of verifying and testing plugs as specified?			N/A
7. Pipe withdrawal rate satisfactory after spotting plug?	<input checked="" type="checkbox"/>		
8. All annular spaces plugged to surface?	<input checked="" type="checkbox"/>		

Plug tested: ☒ No ☐ Pressured ☐ Tagged
If tested, which plug(s) _____

Cement and mechanical plug placement data (attach service company report if available): _____

Cement plug spotting method: bottom of drill stem - total in hole gives setting depth

Operation(s) witnessed: set two plugs at 4650' - 4550' and 2657' (50' above & 50' below)

Additional Remarks: Arrive 2200 - Halliburton set up on location to set plugs - 9 5/8 csg has been cut at 4610 & all 9 5/8 csg above cut has been pulled out of hole - plug set at 4650' - 4550' to seal of water zone encountered just below - second plug set at 2657' (bottom of surface csg) 50' above & 50' below stub
Cementing completed at 0040 4 Apr 84

* Dry hole, depleted producer, service, water well, etc.

UTAH STATE
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

INSPECTION RECORD - ABANDONMENT

Date 1 Apr 84 0530-0830
Location (T-R-S) NENW Sec 16 T24S-R20E
Field Area Wildcat
County Grand
State _____
Inspector deGruyter

WELL NAME Salt Valley #1
Operator Ladd Petroleum
Contractor & Rig CRC Rig #140
Lease Number ML 33520 (State)
Type of Well* Dry Hole
INC Issued _____

	YES	NO
1. Plugs spotted across perforations if casing set?		
2. Plugs spotted at casing stubs?		
3. Open hole plugs spotted as specified?		
4. Retainers, bridge plugs, or packers set as specified?		
5. Cement quantities as specified?		
6. Method of verifying and testing plugs as specified?		
7. Pipe withdrawal rate satisfactory after spotting plug?		
8. All annular spaces plugged to surface?		

Plug tested: ☒ No ☐ Pressured ☐ Tagged
If tested, which plug(s) _____

Cement and mechanical plug placement data (attach service company report if available): _____

Cement plug spotting method: bottom of drillstem - total in hole gives setting depth

Operation(s) witnessed: set two plugs in lower part of hole

Additional Remarks: have already set an additional lower plug (ie 3 plugs total today) when I arrived at drill site
finish cement approx 0830
plugs at 11330-11230 (100') 20SX
10560-10460 (100') 20SX

* Dry hole, depleted producer, service, water well, etc.

UTAH STATE
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
INSPECTION RECORD - DRILLING

DATE/TIME: 5:26 Mar 84 2330 to 0430
LOCATION: NE NW Sec 16 T24S R20E
FI /UNIT: Wildcat
COUNTY: Grand
SPUD DATE: 29 Dec 83
STATUS: DRILLING @ 8654
INSPECTOR: _____

WELL NAME: Salt Valley #1
OPERATOR/REPRESENTATIVE: Ladd Petroleum
CONTRACTOR/RIG: CRC #140
LEASE NO. _____
TESTING @: _____
INC ISSUED: _____

→ Cementing at 8620

GENERAL	YES	NO	
1. Is copy of approved drilling permit and operations plan available on location?	✓		
2. Is drill site properly identified?	✓		
3. Is surface use in accordance with approved plan? Circle items in violation. (new access roads and improvements to existing roads)(well site layout) (pits, sumps, and other ancillary facilities)(containment and disposal of solid, liquid, and gaseous wastes)(source of water supply and construction material)(erosion control)(noise level)(aesthetics) (protection of biota, cultural resources, and other surface resources and uses)	✓		
4. Is general housekeeping satisfactory?	✓		
5. Are personnel safety practices acceptable? (hard hats, no smoking, fire extinguishers, derrickman safety and escape devices, etc.) If no identify.	✓		
6. Has operator reported all spills (if any)?	✓		
7. Is rig lighting vapor-proof or explosion-proof?	✓		
8. Are all production tests run during daylight hours (unless test commenced during daylight continues at stabilized flow rate)?	✓		
BLOWOUT PREVENTER AND ASSOCIATED EQUIPMENT	YES	NO	
9. Is BOP type, pressure rating, and arrangement rated to at least that approved?	✓		
10. Are choke line and manifold, fill line, and kill lines properly installed and operable?	✓		
11. Are controls installed and functional? Circle defective or missing items. (automatic on floor) (remote automatic) (hand wheels)	✓		
12. Is pressure accumulator system adequate to activate BOP?	✓		
13. Are ram-type preventers tested to stack working pressure (or 70 percent of internal yield pressure of casing, if less or to psi as approved)?	✓		
14. Are annular type preventers tested to 50 percent of working pressures?	✓		
15. Are preventer pressure tests run and recorded in driller's log? (a) When initially installed? (b) Before drilling out after each casing string is set? (c) Following repairs? (d) Before drilling into a known high-pressure zone?	✓	—	—
16. Is annular preventer activated at least weekly and recorded in driller's log?	✓		
17. Are pipe rams activated at least each trip and recorded in driller's log?	✓		
18. Are blind rams activated at least each trip and recorded in driller's log?	✓		
19. Does mud hose have safety chain?	✓		
20. Slow pump speed for kill purposes recorded?	✓		
21. Are BOP drills conducted at least weekly for each drilling crew and recorded in driller's log?	✓		
22. Are drill string safety valves to fit all size of pipe in the drill string maintained in the open position of the rig floor?	✓		
23. Is upper kelly cock and/or essentially full opening lower kelly cock capable of running through BOP installed at bottom of kelly?	✓		
24. Is kelly cock wrench available for immediate use?	✓		
CASING AND CEMENTING	YES	NO	
25. When setting surface casing did cement circulate to surface? If not, was remedial action taken?	—	—	—
26. When setting <u>intermediate</u> casing did cement job seem proper? If not, was remedial action taken?	✓		
27. Were all casing strings pressure tested prior to drilling out? (a) Was remedial action taken if test indicated need? (b) Were all pressure tests recorded in driller's log?	—	—	—
28. Were all WOC times adequate?	—	—	—
29. Was casing run in accordance with approved plan of operations (size, weight, grade, depth)?	✓		



TICKET NO. 71803700

28-MAR-84

FARMINGTON

FORMATION TESTING SERVICE REPORT

SALT VALLEY		1	2	10768.1 - 10790.1		LADD PETROLEUM CORPORATION	
LEASE NAME		WELL NO.	TEST NO.	TESTED INTERVAL		LEASE OWNER/COMPANY NAME	
LEGAL LOCATION	16-24S-20E	FIELD AREA	WILDCAT	COUNTY	GRAND	STATE	UTAH SM
S.E. - TWP. - RNG.							

PROGRAM		YES	NO
10.	Is mud system in accordance with approved plan?	✓	
11.	Are mud tests recorded in driller's log?	✓	
12.	Is mud monitoring equipment in accordance with approved plan of operations?	✓	
13.	Is mud conditioned by circulating prior to tripping?	✓	
14.	Is annulus filled if mud level drops below 100 feet while tripping?	✓	
15.	Are piping, separation equipment, and tankage installed to handle hydrocarbon flows during testing?	✓	

SPECIAL OPERATIONS - AIR/GAS DRILLING		YES	NO
16.	Is rotating head properly installed?		
17.	Is flare pilot light installed and operating?		
18.	Is deduster equipment installed, if required?		
19.	Is mud circulating equipment available for rapid installation (including reserve and steel pits)?		

HYDROGEN SULFIDE OPERATIONS		YES	NO
20.	Are number, locations, and access to safe briefing areas adequate?	✓	
21.	Are H ₂ S safety instructions and contingency plan posted?	✓	
22.	Is required personnel safety equipment available? (Protective breathing apparatus) (Resuscitator) (Portable H ₂ S detectors) (First aid kit)	✓	
23.	Have weekly H ₂ S drills been held and recorded on driller's log?	✓	
24.	Is H ₂ S detection and monitoring equipment properly installed with sensing points at critical locations?	✓	
25.	Is wind direction equipment installed?	✓	
26.	Are danger signs and flares available?	✓	
27.	Is kill line installed to safe area?	✓	
28.	Is flare system installed?	✓	
29.	Is mud/gas separator installed and operable?	✓	
30.	Are explosion-proof ventilation fans available for use?	—	—
31.	Is pH of water base mud maintained at 10.0 or above?	—	—
32.	Is mud system treated with H ₂ S neutralizing additive when required?	✓	

OTHER		YES	NO
33.	Special requirements per approved plan (list).		

DESCRIPTION OF OPERATIONS WITNESSED			
Cementing of intermediate string			
REMARKS			
2330 5 Mar 84 - Arrive at well site			
0130 6 Mar 84 - Start pumping cement			

- (Halliburton is cement contractor)
- drop top plug & displace w/ water
 - bump bottom - pressure up to 1700 lbs
 - hold one minute
 - release pressure - plug holding
- 0430 6 Mar 84 - cementing finished - begin WOC



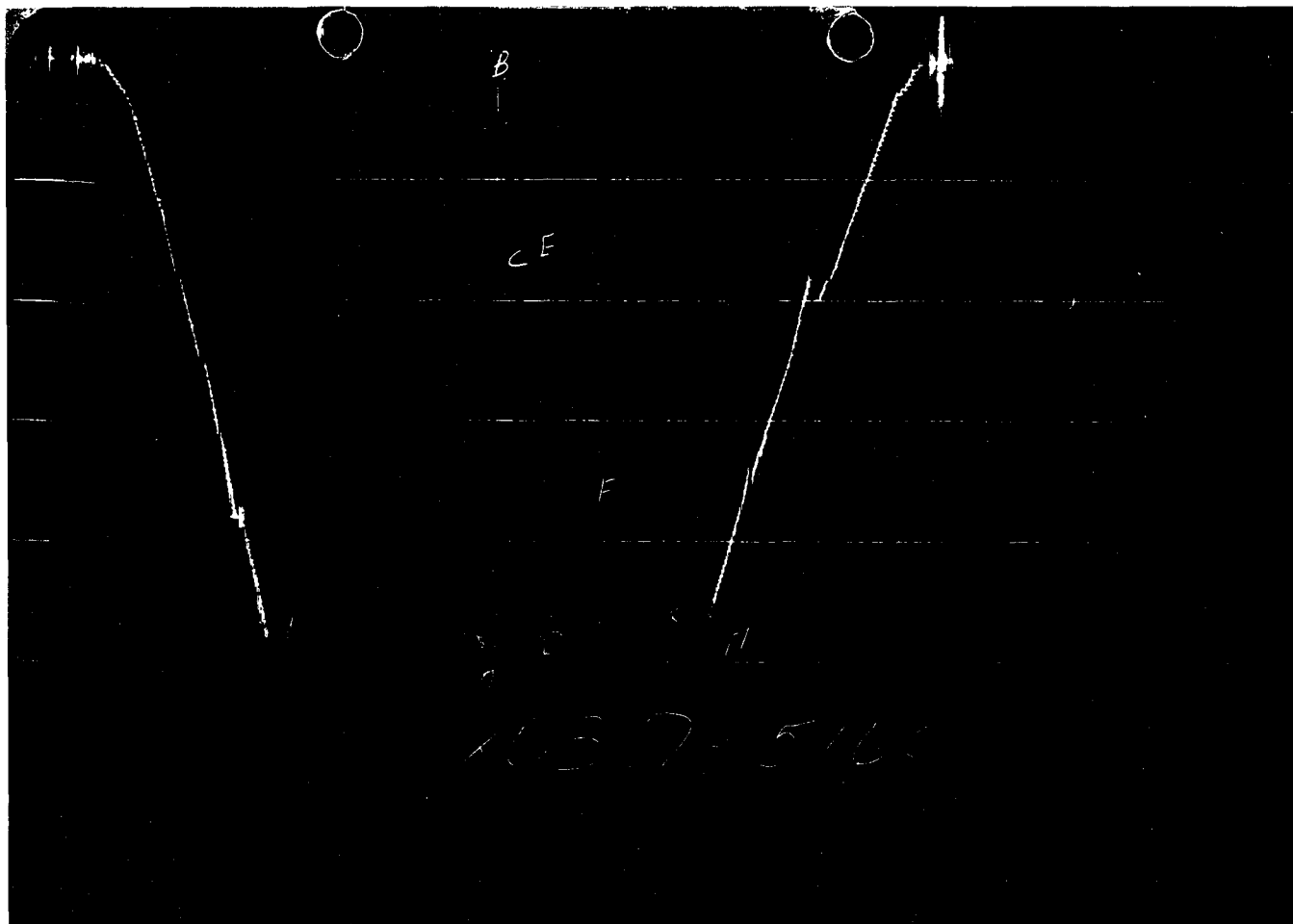
TICKET NO. 71803700

28-MAR-84

FARMINGTON

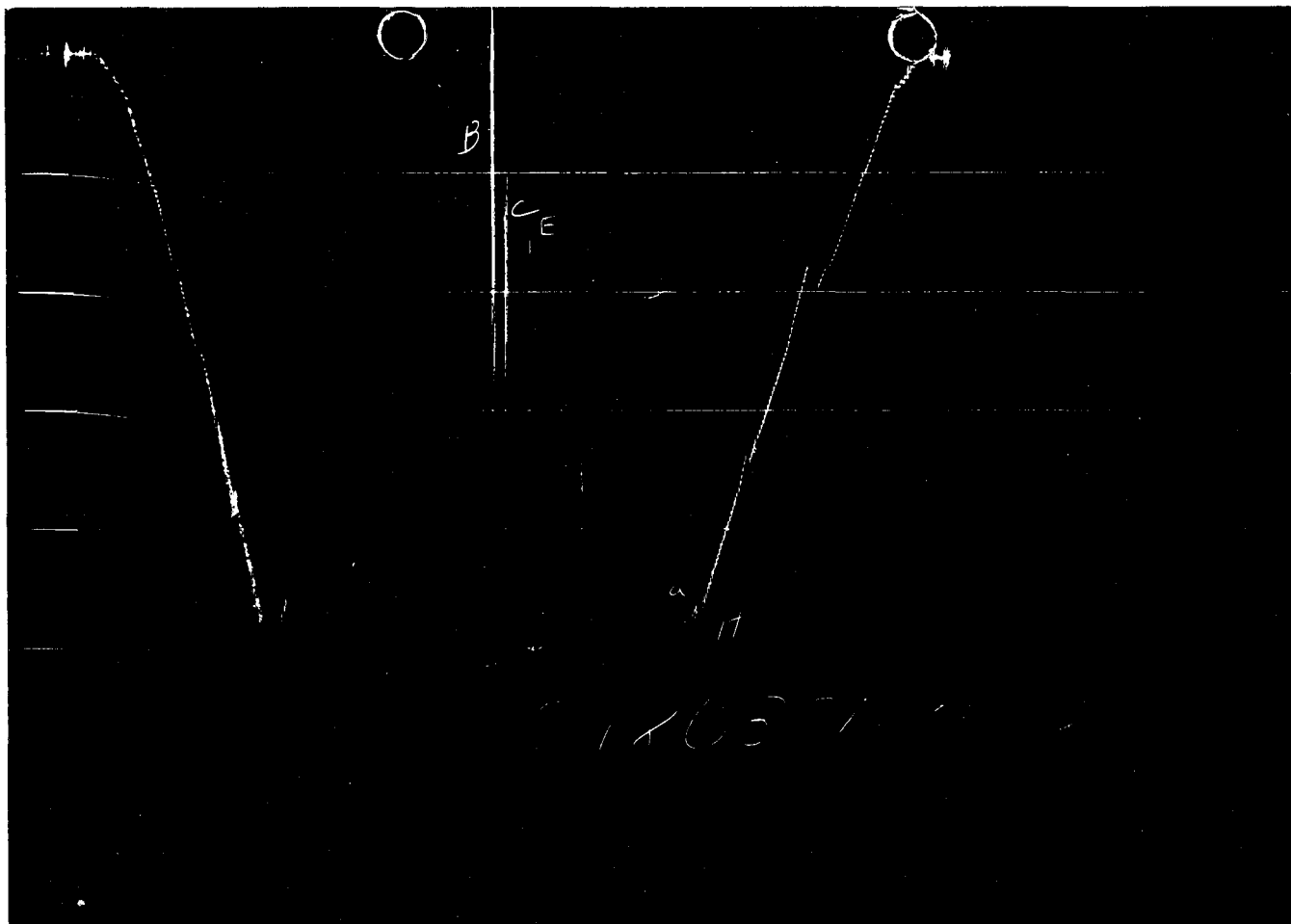
FORMATION TESTING SERVICE REPORT

LEASE NAME		WELL NO.		TEST NO.		TESTED INTERVAL		LEASE OWNER/COMPANY NAME	
SALT VALLEY		1		2		10768.1 - 10790.1		LADD PETROLEUM CORPORATION	
LEGAL LOCATION		FIELD AREA		COUNTY		STATE			
16-24S-20E		WILDCAT		GRAND		UTAH		SM	



GAUGE NO: 5160 DEPTH: 10787.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4839	4872.0			
B	INITIAL FIRST FLOW	214	220.7	15.0	14.7	F
C	FINAL FIRST FLOW	1534	1520.6			
C	INITIAL FIRST CLOSED-IN	1534	1520.6	30.0	30.1	C
D	FINAL FIRST CLOSED-IN	4797	4824.6			
E	INITIAL SECOND FLOW	1534	1602.8	60.0	60.8	F
F	FINAL SECOND FLOW	3610	3594.5			
F	INITIAL SECOND CLOSED-IN	3610	3594.5	120.0	119.5	C
G	FINAL SECOND CLOSED-IN	4754	4824.4			
H	FINAL HYDROSTATIC	4839	4849.6			



GAUGE NO: 7489 DEPTH: 10747.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	4828	4866.2			
B	INITIAL FIRST FLOW		353.6			
C	FINAL FIRST FLOW	1300	1481.3	15.0	14.7	F
C	INITIAL FIRST CLOSED-IN	1300	1481.3			
D	FINAL FIRST CLOSED-IN	4742	4807.7	30.0	30.1	C
E	INITIAL SECOND FLOW	1515	1571.8			
F	FINAL SECOND FLOW	3538	3573.8	60.0	60.8	F
F	INITIAL SECOND CLOSED-IN	3538	3573.8			
G	FINAL SECOND CLOSED-IN	4828	4808.2	120.0	119.5	C
H	FINAL HYDROSTATIC	4828	4835.3			

EQUIPMENT & HOLE DATA

FORMATION TESTED: LEADVILLE
NET PAY (ft): _____
GROSS TESTED FOOTAGE: 22.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft): _____
HOLE OR CASING SIZE (in): 6.500
ELEVATION (ft): 4476
TOTAL DEPTH (ft): 10790.0
PACKER DEPTH(S) (ft): 10762, 10768
FINAL SURFACE CHOKE (in): _____
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 8.70
MUD VISCOSITY (sec): 37
ESTIMATED HOLE TEMP. (°F): _____
ACTUAL HOLE TEMP. (°F): 168 @ 10790.0 ft

TICKET NUMBER: 71803700

DATE: 3-25-84 TEST NO: 2

TYPE DST: OPEN HOLE

HALLIBURTON CAMP:
FARMINGTON

TESTER: H. BELL

WITNESS: KENNY HAYS

DRILLING CONTRACTOR:
CRC #140

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
PIT	1.130 @ 77 °F	_____ ppm
TOP	1.160 @ 83 °F	_____ ppm
MIDDLE	1.180 @ 82 °F	_____ ppm
BOTTOM	1.180 @ 82 °F	_____ ppm
SAMPLER	1.120 @ 91 °F	_____ ppm
	@ _____ °F	_____ ppm

SAMPLER DATA

Pstg AT SURFACE: 20
cu.ft. OF GAS: 0.00
cc OF OIL: 0
cc OF WATER: 1400
cc OF MUD: 0
TOTAL LIQUID cc: 1400

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): _____ @ _____ °F
GAS/OIL RATIO (cu.ft. per bbl): _____
GAS GRAVITY: _____

CUSHION DATA

TYPE AMOUNT WEIGHT

RECOVERED:

920 FEET OF GAS AND WATER CUT MUD
7100 FEET OF GAS CUT WATER

MEASURED FROM
TESTER VALVE

REMARKS:

TICKET NO. 00000000[illegible]

TICKET NO: 71803700

CLOCK NO: 12118 HOUR: 24


 HALLIBURTON
SERVICES

GAUGE NO: 7489

DEPTH: 10747.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	353.6			
2	3.0	511.3	157.7		
3	6.0	766.4	255.1		
4	9.0	1037.5	271.1		
5	12.0	1285.3	247.8		
C 6	14.7	1481.3	195.9		
FIRST CLOSED-IN					
C 1	0.0	1481.3			
2	2.0	4742.6	3261.3	1.8	0.919
3	4.0	4785.6	3304.3	3.1	0.670
4	6.0	4797.2	3316.0	4.3	0.537
5	8.0	4801.9	3320.7	5.2	0.452
6	10.0	4803.9	3322.6	5.9	0.392
7	12.0	4806.0	3324.8	6.6	0.346
8	14.0	4806.0	3324.8	7.2	0.311
9	16.0	4806.0	3324.8	7.7	0.282
10	18.0	4806.2	3325.0	8.1	0.259
11	20.0	4806.5	3325.2	8.5	0.239
12	25.0	4807.7	3326.5	9.2	0.200
D 13	30.1	4807.7	3326.5	9.9	0.172
SECOND FLOW					
E 1	0.0	1571.8			
2	10.0	2147.1	575.3		
3	20.0	2489.9	342.8		
4	30.0	2821.1	331.2		
5	40.0	3097.4	276.3		
6	50.0	3344.7	247.3		
F 7	60.8	3573.8	229.0		
SECOND CLOSED-IN					
F 1	0.0	3573.8			
2	2.0	4780.6	1206.9	2.0	1.580
3	4.0	4797.8	1224.1	3.8	1.296
4	6.0	4802.8	1229.0	5.5	1.135
5	8.0	4804.9	1231.2	7.3	1.016
6	10.0	4805.4	1231.6	8.8	0.932
7	12.0	4806.5	1232.7	10.4	0.863
8	14.0	4806.5	1232.7	11.8	0.804
9	16.0	4806.5	1232.7	13.2	0.758
10	18.0	4807.1	1233.3	14.5	0.716
11	20.0	4807.1	1233.3	15.8	0.678
12	40.0	4808.6	1234.8	26.1	0.460
13	60.0	4810.3	1236.6	33.4	0.354
14	80.0	4810.8	1237.0	38.8	0.289

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
15	100.0	4811.6	1237.8	43.0	0.244
G 16	119.5	4808.2	1234.4	46.3	0.213

REMARKS:

TICKET NO: 71803700

CLOCK NO: 14128 HOUR: 24


 HALLIBURTON
SERVICES



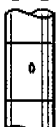










GAUGE NO: 5160

DEPTH: 10787.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	220.7			
2	3.0	523.5	302.8		
3	6.0	796.2	272.6		
4	9.0	1075.6	279.5		
5	12.0	1326.3	250.6		
C 6	14.7	1520.6	194.3		
FIRST CLOSED-IN					
C 1	0.0	1520.6			
2	2.0	4734.5	3214.0	1.8	0.916
3	4.0	4796.6	3276.1	3.1	0.669
4	6.0	4811.4	3290.9	4.3	0.538
5	8.0	4816.9	3296.4	5.2	0.454
6	10.0	4819.9	3299.4	6.0	0.391
7	12.0	4821.0	3300.4	6.6	0.347
8	14.0	4822.0	3301.5	7.2	0.311
9	16.0	4823.3	3302.8	7.6	0.282
10	18.0	4823.5	3303.0	8.1	0.259
11	20.0	4824.2	3303.6	8.5	0.239
12	25.0	4824.4	3303.8	9.2	0.200
D 13	30.1	4824.6	3304.0	9.9	0.172
SECOND FLOW					
E 1	0.0	1602.8			
2	10.0	2134.7	532.0		
3	20.0	2474.8	340.0		
4	30.0	2795.1	320.3		
5	40.0	3074.2	279.0		
6	50.0	3338.1	264.0		
F 7	60.8	3594.5	256.4		
SECOND CLOSED-IN					
F 1	0.0	3594.5			
2	2.0	4787.5	1193.0	1.9	1.589
3	4.0	4810.4	1215.9	3.8	1.302
4	6.0	4816.7	1222.2	5.6	1.132
5	8.0	4818.6	1224.2	7.2	1.021
6	10.0	4819.3	1224.8	8.9	0.930
7	12.0	4820.3	1225.8	10.4	0.862
8	14.0	4821.4	1226.9	11.8	0.806
9	16.0	4822.2	1227.8	13.2	0.758
10	18.0	4822.2	1227.8	14.5	0.716
11	20.0	4822.9	1228.4	15.8	0.679
12	40.0	4824.2	1229.7	26.1	0.461
13	60.0	4824.8	1230.3	33.4	0.354
14	80.0	4824.8	1230.3	38.8	0.289

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
15	100.0	4824.8	1230.3	43.0	0.244
G 16	119.5	4824.4	1229.9	46.3	0.213

REMARKS:

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	3.500	2.764	10218.0	
3		DRILL COLLARS.....	4.750	2.060	423.0	
50		IMPACT REVERSING SUB.....	4.000	2.250	1.0	10642.0
3		DRILL COLLARS.....	4.750	2.060	92.0	
13		DUAL CIP SAMPLER.....	5.030	0.870	7.0	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	10745.0
80		AP RUNNING CASE.....	5.000	2.250	4.0	10747.0
15		JAR.....	5.030	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	3.0	
70		OPEN HOLE PACKER.....	5.500	1.530	6.0	10762.0
70		OPEN HOLE PACKER.....	5.500	1.530	6.0	10768.0
20		FLUSH JOINT ANCHOR.....	5.000	2.440	15.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		5.0	10787.0
TOTAL DEPTH						10790.0

EQUIPMENT DATA

LADD PETROLEUM

SALT VALLEY #1

GRAND COUNTY

UTAH

BY

L. A. (LARRY) PRENDERGAST
187 RETA DRIVE
GRAND JUNCTION, COLORADO 81503
(303) 245-3921

RECEIVED

MAY 14 1984

DIVISION OF OIL
GAS & MINING

GEOLOGICAL REPORT
ON
SALT VALLEY #1
FOR
LADD PETROLEUM CORPORATION

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KB 4473

FORMATION TOPS

<u>FORMATION</u>	<u>PROGNOSIS</u>	<u>SAMPLE</u>	<u>ESTIMATED TOP</u>	<u>E-LOG</u>	<u>SUBSEA LOG</u>
Moab Tongue					
Entrada					
Carmel					
Navajo					
Kayenta	2305	2252		2250	
Wingate	2635	2350		2328	
Chinle	2930	2633		2622	
Shinarump	3200	3176		3176	
Moenkopi	3530	3544		3536	
Cedar Mesa	4880	4465		4452	
Cutler	5350	5258		5258	
Cutler Sand					
Cutler Shale					
Rico Limestone		6344		6342	
Upper Hermosa	6940	6708		6696	
Honaker Trail					
Paradox				8266	
Salt	8940	8673		8673	
Pinkerton Trail (Base Salt)	10500	10364		10364	
Molas		10478		10476	
Leadville	10840	10498		10496	
Ouray	11405	11050		11058	
Elbert		11163		11165	
McCracken	11235			11222	
Aneth		11226		11266	

Ladd Petroleum Corporation
Salt Valley #1

DEVIATION SURVEYS

Deviation surveys after surface casing

<u>DEPTH</u>	<u>SURVEY</u>	<u>CHANGE</u>
70	1/4	0
136	1/4	0
260	±/4	0
412	1/4	0
595	1/2	1/4
810	1/2	0
1108	1	1/2
1235	1/2	1/2
1325	0	1/2
1447	0	0
1571	1/2	1/2
1690	1/2	0
1840	3/4	1/4
1996	3/4	0
2180	1 1/4	1/2
2273	3/4	1/2
2427	1/4	1/2
2580	1/2	1/4
3383	1	1/2
3672	1/2	1/2
3979	1/4	1/4
4499	2 1/4	2
4591	1 3/4	1/2

DEVIATION SURVEYS

Deviation surveys after surface casing

<u>DEPTH</u>	<u>SURVEY</u>	<u>CHANGE</u>
<u>4814</u>	<u>1 1/4</u>	<u>1/2</u>
<u>4905</u>	<u>1 1/2</u>	<u>1/4</u>
<u>5030</u>	<u>1 1/4</u>	<u>1/4</u>
<u>5123</u>	<u>1 1/4</u>	<u>1/4</u>
<u>5273</u>	<u>1 1/4</u>	<u>0</u>
<u>5424</u>	<u>1 1/4</u>	<u>1/4</u>
<u>5576</u>	<u>1/2</u>	<u>3/4</u>
<u>5666</u>	<u>3/4</u>	<u>1/4</u>
<u>5909</u>	<u>1</u>	<u>1/4</u>
<u>6032</u>	<u>1 1/4</u>	<u>1/4</u>
<u>6128</u>	<u>2</u>	<u>3/4</u>
<u>6249</u>	<u>2</u>	<u>0</u>
<u>6408</u>	<u>1 1/2</u>	<u>1/2</u>
<u>6534</u>	<u>2 1/4</u>	<u>3/4</u>
<u>6696</u>	<u>2 3/4</u>	<u>1/2</u>
<u>6851</u>	<u>3 1/2</u>	<u>3/4</u>
<u>7011</u>	<u>3 1/4</u>	<u>1/4</u>
<u>7041</u>	<u>3 3/4</u>	<u>1/2</u>
<u>7168</u>	<u>4 3/4</u>	<u>1</u>
<u>7245</u>	<u>4 1/2</u>	<u>3/4</u>
<u>7310</u>	<u>4 1/2</u>	<u>0</u>
<u>7372</u>	<u>4 1/4</u>	<u>1/4</u>
<u>7436</u>	<u>4 1/2</u>	<u>1/4</u>

DEVIATION SURVEYS

Deviation surveys after surface casing

<u>DEPTH</u>	<u>SURVEY</u>	<u>CHANGE</u>
<u>7500</u>	<u>4 3/4</u>	<u>1/4</u>
<u>7561</u>	<u>5 3/4</u>	<u>1</u>
<u>7563</u>	<u>6</u>	<u>1/4</u>
<u>7593</u>	<u>5 3/4</u>	<u>1/4</u>
<u>7609</u>	<u>6</u>	<u>1/4</u>
<u>7641</u>	<u>5 1/2</u>	<u>1/2</u>
<u>7704</u>	<u>5</u>	<u>1/2</u>
<u>7764</u>	<u>5</u>	<u>0</u>
<u>7431</u>	<u>5</u>	<u>0</u>
<u>7872</u>	<u>4 1/4</u>	<u>3/4</u>
<u>7896</u>	<u>4 3/4</u>	<u>1/2</u>
<u>7959</u>	<u>4</u>	<u>3/4</u>
<u>8023</u>	<u>3 3/4</u>	<u>1/4</u>
<u>8085</u>	<u>4 1/2</u>	<u>3/4</u>
<u>8110</u>	<u>3 3/4</u>	<u>3/4</u>
<u>8170</u>	<u>4</u>	<u>3/4</u>
<u>8260</u>	<u>4 1/2</u>	<u>1/2</u>
<u>8349</u>	<u>4</u>	<u>1/2</u>
<u>8476</u>	<u>3 3/4</u>	<u>1/4</u>
<u>8635</u>	<u>4 1/4</u>	<u>1/2</u>
<u>8893</u>	<u>4 1/4</u>	<u>0</u>
<u>9023</u>	<u>3 3/4</u>	<u>1/2</u>
<u>9118</u>	<u>3 1/2</u>	<u>1/4</u>

BIT RECORD

OPERATOR: Ladd Petroleum Co. WELL NAME: Salt Valley #1 LOCATION NO: _____CONTRACTOR: CRC/Colorado Well Serv RIG #: 140 AREA: Wildcat STATE/COUNTY Grand Canyon, UtahRIG MAKE & MODEL: CABot-Franks 1200 SURF CSG: 13 3/8 @ 2657 INT. CSG: 8620, 10510 PROD CSG: _____NO 1 PUMP, MAKE & MODEL: Gardner Denver PZ-8 SPUD DATE: 29 Dec. 83 G.L.: 4456NO 2 PUMP, MAKE & MODEL: Gardner Denver PZ-8 T.D. DATE: 31 Mar 83 K.B.: 4473

BIT NO.	SIZE	MAKE Type	JETS	BIT SER. NO.	DEPTH OUT	FEET	HOURS	ACCUM. HOURS	WT. M.	RPM	VERT. DEV.	PUMP PSI	MUD		BIT COND.			REMARKS
													WT.	VIS	T	B	G	
1	12 1/2	STC F-1	open	EE2157	1257	257	53 1/2	53 1/2	8-12	90	1/4	Air	ppg.		6	8	0	
2	12 1/4	J-33	15, 15	411CK	1869	612	27	80 1/2	20/25	90	1/2	1400	8.8	40	6	8	0	
3	12 1/4	HTC J-33	15, 15	471CK	2683	814	51 1/2	132	25/30	80/90		1400	9.0	38				
4	12 1/4	SEC Reamer			929	869	37 1/2	169 1/2	20/25	100/110		1200	9.0	44				
5	17 1/2	SEC Reamer			2653	1724	84	253	20/30	100		1100	9.2	40				
6	12 1/4	HTC J-4	15, 15	OD170	2688	5		258				Air						
7	12 1/4	STC F-3	Open	EC2-15	2910	222	9 1/2	267 1/2	10	50	1.	Air						
8	12 1/4	HTC J-4	Open	RR #6	2943	33	3	270 1/2	15	70	1	Air						
9	12 1/4	SFC GM86	Open	971720	4726	1783	53	323 1/2	15/20	70	1 3/4	Air			2	8	1	
10	12 1/4	HTC J-33	15, 15	WNO07	5133	407	54	377 1/2	35/40	70	1 1/2	1650	9.1	40	8	8	I	
11	12 1/4	STC F-4	15, 15	EC8770	6138	1005	110	487 1/2	40/45	65	2	1900			6	4	I	
12	12 1/4	STC F-4	15, 15	EE8124	7054	916	125	612	40	65	3 1/2	2300	9.1	46	6	4	1/4	
13	12 1/4	STC F-3	15, 15	EC8771	7506	549	121	733	15/40	60	5 3/4	2350	9.1	46	2	4	1/8	
14	12 1/4	HTC J-14	15, 15	BN370	2772	269	74 1/4	807 1/2	20	60/70	4 1/2	2350	9.3	51	8	6	1/8	
15	12 1/4	HTC J-55R	15, 15	AV173	8093	221	51	858 1/2	20/23	60/70	4 1/2	2350	9.2	52	8	8	1/8	

COMPANY Ladd Petroleum Corporation

WELL NO. Salt Valley #1

LOCATION _____

ZONE OF INTEREST NO. 1

INTERVAL: From 8328 To 8335

DRILL RATE: Abv 13 m/ft Thru 2 m/ft Below _____

MUD GAS-CHROMATOGRAPH DATA W/9.2 Vis/49 Hydrostatic 3987 psi

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER	CO ₂
Before	9	.019	-	-	-	-	0	
During	11	.022	-	-	-	-	-	
After								

Type gas increase: Gradual ☒ Sharp ☐

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☒ Decreasing ☐

CARBIDE HOLE RATIO: GRAMS READING X Min. in Peak = _____ Sensitivity: Poor ☐ Fair ☐ Good ☐

FLUO: Mineral ☐ Even ☐ Spotty ☐
 None ☐ % in total sample 10-20
 Poor ☐
 Fair ☒ % in show lithology 50
 Good ☒ COLOR: orn-yel

CUT: None ☐ Streaming
 Poor ☐ Slow ☒
 Fair ☐ Mod ☒
 Good ☐ Fast ☐
 COLOR: yel w/good yell
 residue ring

STAIN: None ☐ Poor ☒ Fair ☒ Good ☐ Live ☒ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☒ Dk. ☒

POROSITY: Poor ☒ Fair ☒ Good ☐ Kind Intergranular, tr fract.

LITHOLOGY Dolo lt tan-lt brn vfxln v sdy grdng to SS lt tan-lt brn vfg m-wcem
dolo s/fria tr brn w/Stn tr Anh fract fill

SAMPLE QUALITY good

NOTIFIED Bruce Van Deventer @ _____ HRS. DATE: _____

REMARKS Rec. DST #2 1-303-973-4209
RS 1-303-841-5589
8320-36

ZONE DESCRIBED BY L.A. Prendergast

COMPANY Ladd Petroleum CorporationWELL NO. Salt Valley #1

LOCATION _____

ZONE OF INTEREST NO. 2INTERVAL: From 10772 To 10785DRILL RATE: Abv 7-8 m/ft Thru 2-4 m/ft Below _____

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	4	.004					
During	7	.005					
After							

Type gas increase: Gradual ☐ Sharp ☐

Lag 84 @ 10510

Hydro 4879

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☒ Decreasing ☐CARBIDE HOLE RATIO: GRAMS
READING X Min. in Peak = _____Sensitivity: Poor ☐ Fair ☐ Good ☒
Liner @ 10,510

FLUO: Mineral ☐ Even ☐ Spotty ☐
 None ☐ % in total sample _____
 Poor ☐
 Fair ☐ % in show lithology _____
 Good ☐ COLOR: _____

CUT: None ☐ Streaming
 Poor ☐ Slow ☐
 Fair ☐ Mod ☐
 Good ☐ Fast ☐
 COLOR: _____

STAIN: None ☐ Poor ☒ Fair ☒ Good ☐ Live ☒ Dead ☒ Residue ☐ Even ☐ Spotty ☒ Lt. ☐ Dk. ☒POROSITY: Poor ☐ Fair ☒ Good ☒ Kind Vuggy; possible fracture.LITHOLOGY Dolo lt gry-brn vfxln microsucrosic w/blk stain s/frags w/vg

porosity

SAMPLE QUALITY

NOTIFIED Bruce Van Deventer on _____ @ _____ HRS. DATE: _____
locationREMARKS DST 10,768 - 10,785ZONE DESCRIBED BY L.A. Prendergast

1/2 1257
1/3 1651

11

DAILY REPORT

MND 1946

TEMP _____ SPUD 29 Dec 83 DAY 6 DATE 4 Jan 84

COMPANY Ladd Petroleum

WELL Salt Valley #2

LOCATION _____

DEPTH YEST. 1670 TODAY 1045 FTG 375 FT/HR 10

OPERATION Drlg.

BIT NO. 3 TYPE _____ IN 1869 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 25 M RPM 10 PP 1400 SPM 110 LAG @

MUD 1946 WT 8 VIS 36 WL 11.6 CK 2/32 PH 10.2 CL 500 Fe/Ca 120
SURVEYS _____ 1996 3/4 1890 3/4 1235 1/2 412 1/4
_____ 1690 1/2 1571 1/2 1108 1 260 1/4
_____ 1447 0 810 1/2 136 1/4
_____ 1325 0 595 1/2 20 1/4

GEOLOGICAL

FORM TOPS _____

FORMATION Navajo

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP aa SPUD 29 Dec 83 DAY 7 DATE 5 Jan 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 2045 TODAY 2345 FTG 300 FT/HR _____
 OPERATION Drilg.

BIT NO. 3 TYPE HTC J-33 IN 1869 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 25 m RPM 90 PP 1400 SPM 110 LAG _____ @ _____

MUD 2333 WT 8⁸ VIS 40 WL 110 CK 2/32 PH 10 CL 400 Fe/Ca 100
 SURVEYS 2180 1 1/4
2273 3/4

FORM TOPSK aventa 2237 GEOLOGICAL (Wingate 2335)

FORMATION Kayenta (Wingate)

LITHOLOGY SS - Pk - red, vfg, slty, etc.

MUD GAS _____ TG _____ BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

MDN 2655

DAILY REPORT

TEMP _____ SPUD _____ DAY 8 DATE 6 Jan 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST 2345 TODAY 2668 FTG 323 FT/HR _____
 OPERATION 2645

Irip for 17 1/2 hole operation.

BIT NO. 3 TYPE HTC J-33 IN 1869 OUT 2668 FT. 799 HRS. 53 1/2
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 2668 WT 9° VIS 40 WL 15° CK 2/32 PH 9.7 CL 1500 Fe/Ca 120
 SURVEYS _____

GEOLOGICAL

FORM TOPS Chinle 2618
 FORMATION _____

LITHOLOGY Sh - brick red, s/brn, slty in pt, abundant Anhydrite, white, soft.

MUD GAS N/A TG _____ BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED Bruce Van Deventer 800-525-6650 DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

14

TEMP _____ SPUD _____ DAY 9 DATE 7 Jan 84
COMPANY Ladd Petroleum
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2668 TODAY _____ FTG _____ FT/HR _____
OPERATION Open Hole to 17 1/2

SLM 2668-2683 TD

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 456 WT 9⁰ VIS 38 WL 14³ CK 2/32 PH 10⁰ CL 1200 Fe/Ca 80
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION T.D. Chinle

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED No call as per B.V. @ _____ DATE _____
GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 10 DATE 8 Jan 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 2668 TODAY _____ FTG _____ FT/HR _____
 OPERATION Ream Hole to 17 1/2

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 911 WT 9 VIS 42 WL 12.4 CK 2 PH 10.5 CL 1000 Fe/Ca 60
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED No call as per B.V. @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

16

TEMP _____ SPUD 29 Dec 83 DAY 11 DATE 9 Jan 84
COMPANY Ladd Petroleum
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2683 TODAY _____ FTG _____ FT/HR _____
OPERATION Reaming at 1260 ±

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 1238 WT _____ VIS 9.0 WL 40 CK 17.2 PH 2/32 CL 750 Fe/Ca 280
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

800-525-6655

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS. _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 12 DATE 10 Jan 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION NE/A NW/4 S16 T24S R20E Brand Co. Utah

DEPTH YEST. 1260 TODAY 2000 FTG 740 FT/HR _____
 OPERATION Reaming 17 1/2 hole

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 1953 WT 9 VIS 41 WL 18.8 CK 2 PH 10 5 CL 600 Fe/Ca 360
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 13 DATE 11 Jan 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 2000 TODAY 2347 FTG 347 FT/HR _____
 OPERATION _____
Reaming 17 1/2 Hole

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 2323 WT 9.1 VIS 43 WL 16/4 CK 2 PH 10.5 CL 1100 Fe/Ca 380
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 14 DATE 12 Jan 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 2347 TODAY 2683 FTG _____ FT/HR _____
 OPERATION _____
 circ & prep to ran 13 3/8 csg.

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 2665 WT 9.0 VIS 40 WL 14.9 CK 2 PH 10.0 CL 1200 Fe/Ca 180
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

20

TEMP _____ SPUD _____ DAY 15 DATE 13 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2683 TODAY 2656 FTG _____ FT/HR _____
OPERATION SLM 2683 = 2656

Wait on CMT

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

Plug Down at 1:15 a.m.

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 16 DATE 14 Jan 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION NE NW Sec 16 T245 R20E

DEPTH YEST. _____ TODAY _____ FTG _____ FT/HR _____
 OPERATION Nipple up B.O.P.

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____
Ran 68 JTS 61# K-55 and shoe to 2657.60 landed at 2657 K.D.
 FORMATION Dmt w/1200 %X Howcolite Tail in w/300 SX Class H

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

22

TEMP _____ SPUD _____ DAY 17 DATE 15 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. _____ TODAY _____ FTG _____ FT/HR _____
OPERATION Nipple Up B.O.P. Pressure Test change out undersize flange adapter.

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____
ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

23

TEMP _____ SPUD _____ DAY 18 DATE 16 Jan 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. _____ TODAY 2683 FTG _____ FT/HR _____
 OPERATION Magnaflux bottom hole assembly TIH

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED BV _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

24

TEMP _____ SPUD _____ DAY 19 DATE 17 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2688 TODAY 2715 FTG 27 FT/HR 2m/ft
OPERATION Drlg.

BIT NO. 7 TYPE F-3 IN 2688 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____
2600 CFM @ 300 PSI

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Chinle

LITHOLOGY _____

MUD GAS Trace TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 303 620-0278 @ _____ DATE _____
GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

25

TEMP _____ SPUD _____ DAY 20 DATE 18 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2715 TODAY 2910 FTG 195 FT/HR _____
OPERATION TIH W/Fishing tools

Trip out W/Bit #7. Left 3 cones and shanks in hole

BIT NO. 7 TYPE STC-F3 IN 2688 OUT 2910 FT. 222 HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Chinle

LITHOLOGY Sltsn - lt org to brick red firm to hd, tite, sli calc w/s
gradng to vfg ss wsort, subang-subrdd. Tr thin grn mudstone
lenses. Trace LS wh, lt pk dense nodules

MUD GAS _____ TG _____ BACKGROUND _____
ZONE OF INTEREST NO. _____ @ _____ TO _____
SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____
GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

26

TEMP _____ SPUD _____ DAY 21 DATE 19 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2910 TODAY 2910 FTG _____ FT/HR _____
OPERATION Milling on

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Chinle

LITHOLOGY _____

MUD GAS tr _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____
GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 22 DATE 20 Jan 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 2910 TODAY 2910 FTG _____ FT/HR _____
 OPERATION Milling on Magnet s/cirt.

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Chinle

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

28

TEMP _____ SPUD _____ DAY 23 DATE 21 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. _____ TODAY _____ FTG _____ FT/HR _____
OPERATION Fishing for Junk

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
GEOLOGY _____ LOGGING STDBY MILEAGE _____ EXP _____

DAILY REPORT

29

TEMP _____ SPUD _____ DAY 24 DATE 22 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. _____ TODAY 2910 FTG _____ FT/HR _____
OPERATION For Junk - Recovered 1 cone

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Chinle

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

30

TEMP _____ SPUD _____ DAY 25 DATE 23 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. _____ TODAY 2910 FTG _____ FT/HR _____
OPERATION Fishing - recovered a total of 3 cones and peices of magnet skirt
and more.

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Chiple

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B. V. 800-525-6655 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

31

TEMP _____ SPUD _____ DAY 26 DATE 24 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 2910 TODAY 3158 FTG 248 FT/HR 35
OPERATION Drilg

BIT NO. 9 TYPE GM 88 IN 2943 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 15m RPM 76-80 PP _____ SPM _____ LAG _____ @ _____
2600 CFM @ 300 PSI

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS 2994
3148

GEOLOGICAL

FORM TOPS _____

FORMATION Chinle

LITHOLOGY Sltsn - red-brn, brick red, hd, dense, w/s mudstone, grn, gry-gr

MUD GAS 2-3 TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____
GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

32

TEMP _____ SPUD _____ DAY 27 DATE 25 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 3158 TODAY 4080 FTG 922 FT/HR 40.6
OPERATION Dr.g

BIT NO. 9 TYPE GM88 IN 2943 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS
3383 - 1.0
3672 1/2
3979 - 1/4

GEOLOGICAL

FORM TOPS Shinarump 3/76 Moenkopi 3944

FORMATION Moenkopi

LITHOLOGY SH brn, slty, micaceous in pt, Sltsn interlams tr wh SS

MUD GAS 3-4 TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

33

TEMP _____ SPUD _____ DAY 29 DATE 27 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 4661 TODAY 4732 FTG 71 FT/HR _____
OPERATION _____

Trip in hole - mud established circulation drlg.

BIT NO. 10 TYPE HTC J-73 IN 4726 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 25M WT 8.6 VIS 47 WL 18 CK 2 PH 9.5 CL 4000 Fe/Ca 360
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Cedar Mesa

LITHOLOGY SS org-red, vf-mg, w/abn, c vcg rdd-subang w/abn c vcg w rdd
lse w/tr Anhy wh, soft.

MUD GAS 3 units TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED Ladd Petroleum Company @ _____ DATE _____
GEOLOGY B.V. 800-525-6655 LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

34

TEMP _____ SPUD _____ DAY 30 DATE 28 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 4732 TODAY 4911 FTG 179 FT/HR _____
OPERATION Drig at E.T. #10

BIT NO. 10 TYPE HTC J-33 IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 30 RPM 68 PP 1700 SPM 110 LAG 45 @ 9885

MUD 4904 WT 8.8 VIS 39 WL 25 CK 3 PH 10.5 CL 6,500 e/Ca 320
SURVEYS _____
4814-1 1/4

GEOLOGICAL

FORM TOPS _____

FORMATION Cedar Mesa

LITHOLOGY SS red-org f-mg subrdd-rdd m sort p cem abn anhy wh,pk soft

MUD GAS 2-3 TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

35

TEMP _____ SPUD _____ DAY 31 DATE 29 Jan 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 4911 TODAY 5083 FTG 172 FT/HR _____
OPERATION Drilg w/ Bit #10

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 5070 WT 9.1 VIS 39 WL 23.5 CK 2 PH 10.0 CL 11 Fe/Ca 40

SURVEYS _____
4905 1 1/2
5030 1 1/4

GEOLOGICAL

FORM TOPS _____

FORMATION Cedar Mesa

LITHOLOGY _____

MUD GAS 2-3 TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

36

TEMP _____ SPUD _____ DAY 33 DATE 31 Jan 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 5185 TODAY 5247 FTG 62 FT/HR 10
 OPERATION Drlg w/ bit #11 STC F-4

BIT NO. 11 TYPE STC F-4 IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 5236 WT 9.2 VIS 39 WL 17.0 CK 2 PH 9.3 CL 10500 Fe/Ca 300
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Cedar Mesa

LITHOLOGY SS aa w/Anhy aa, abn cavings from trip and washout in D.C.

MUD GAS 1-2 TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

37

TEMP _____ SPUD _____ DAY 34 DATE a Feb 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 5247 TODAY 5477 FTG 230 FT/HR _____
 OPERATION Drilg w/bit #11

BIT NO. 11 TYPE STC F-4 IN 4726 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 40-45 RPM 60-70 PP 1750 SPM 10 LAG _____ @ _____

MUD 5465 WT 9.1 VIS 40 WL 15.0 CK 2 PH 8.8 CL 10600 Fe/Ca 50
 SURVEYS _____
5273 1 1/2
5424 - 1 1/4

GEOLOGICAL

FORM TOPS _____
Cutler 5258
 FORMATION _____

LITHOLOGY SS m-cg
SS red-org vfg vslty, micromicaceous, arsosoc, anhydritic

MUD GAS 1-2 TG _____ BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

38

TEMP _____ SPUD _____ DAY 35 DATE 2 Feb 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 5477 TODAY 5709 FTG 232 FT/HR _____
OPERATION Drlg w/bit #11

BIT NO. 11 TYPE STC F-4 IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 40 RPM 665 PP 1900 SPM _____ LAG _____ @ _____

MUD 5705 WT 9 VIS 41 WL 14.0 CK 2 PH 10.8 CL 10200 Fe/Ca 50
SURVEYS _____

5576 1/2
5666 3/4

GEOLOGICAL

FORM TOPS _____

FORMATION Cutler

LITHOLOGY SS aa

MUD GAS _____ TG _____ BACKGROUND 1-2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

39

TEMP _____ SPUD _____ DAY 36 DATE 3 Feb 84
COMPANY Ladd Petroleum Company
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 5709 TODAY 5888 FTG 179 FT/HR _____
OPERATION Drlg w/ bit 11

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 45 RPM 65 PP 1850 SPM _____ LAG _____ @ _____

MUD 5826 WT 9.1 VIS 41 WL 13.0 CK 2 PH 11 CL 10000 Fe/Ca 50
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Cutler

LITHOLOGY SS - aa
Int bds SS & Sltsn 5800
pred Sltsn 5850

MUD GAS 3 TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ B.V. 800-525-6685 DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 37 DATE 4 Feb 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 5888 TODAY 6075 FTG 187 FT/HR _____
 OPERATION Drlg w/Bit 11

BIT NO. 11 TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 42 RPM 65 PP 1950 SPM _____ LAG 69 @ 6012

MUD 6072 WT 9.0 VIS 38 WL 16.0 CK 2 PH 10.6 CL 7200 Fe/Ca 50
 SURVEYS _____
5909 1.0
6032 1 1/4

GEOLOGICAL

FORM TOPS Tiger 6835 - 5810+

FORMATION Cutler Sh
Cutler

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

R.S. 303-841-5584

CALLED B.V. 973-4209 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

41

TEMP _____ SPUD _____ DAY 38 DATE 5 Feb 84

COMPANY _____

WELL _____

LOCATION _____

6166DEPTH YEST. 6075 TODAY 6166 FTG 91 FT/HR _____

OPERATION _____

Drlg W/Bit #12BIT NO. 11 TYPE STC F-4 IN 5133 OUT 6138 FT. 1005 HRS. 110BIT NO. 12 TYPE STC F-4 IN 6138 OUT _____ FT. _____ HRS. _____WOB 35 RPM 60 PP 2000 SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS 6128 2.0GEOLOGICAL

FORM TOPS _____

FORMATION Lower Cutler

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS. No Trip GasRS 303-841 5584CALLED B.V. 800-525-6655 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 39 DATE 6 Feb 84
 COMPANY Ladd Petroleum Company
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 6166 TODAY 6381 FTG 215 FT/HR _____
 OPERATION Drlg W/Bit #12

BIT NO. 12 TYPE STC F-4 IN 6138 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 6378 WT 9.2 VIS 40 WL 15.6 CK 2 PH 10.5 CL 6400 Fe/Ca 100
 SURVEYS _____
6249 - 20

GEOLOGICAL

FORM TOPS 6364 (Hermosa)

FORMATION Cutler

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 1.2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED BV 303 841 3384 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 40 DATE 7 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 6381 TODAY 6577 FTG 196 FT/HR _____
 OPERATION Dr1g

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 45-50 RPM 65 PP 1950 SPM _____ LAG _____ @ _____

MUD _____ WT 9.2 VIS 39 WL 14.8 CK 2 PH 9.0 CL 5100 Fe/Ca 160
 SURVEYS _____
6408 - 1. 1/2

GEOLOGICAL

FORM TOPS _____

FORMATION Lower Cutler

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 3-4

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED BV @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

44

TEMP _____ SPUD _____ DAY 41 DATE 8 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 6577 TODAY 6761 FTG 184 FT/HR _____
 OPERATION Drilg W/ Bit #12

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. 50
 WOB 42 RPM 60 PP 2300 SPM _____ LAG 75 @ 6538

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____

6534 2 1/4
6696- 2 3/4

GEOLOGICAL

FORM TOPS 6708 Hermosa

FORMATION Hermosa

LITHOLOGY Gray to brown, very silty, very micaceous, Limestone
whitic, very micaceous, sandstone.

MUD GAS _____ TG _____ BACKGROUND 2
 ZONE OF INTEREST NO. 1 (no show) @ 6586 TO 6597
 SHOWS-BREAKS 508 1-2 3-5

DEPTH <u>6586</u>	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU
		3	70					
		4	580	110	110			None

REMARKS Drill ahead

CALLED BV and DS @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

45

TEMP _____ SPUD _____ DAY 42 DATE 9 Feb 84
COMPANY Ladd Petroleum
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 6761 TODAY 6893 FTG 132 FT/HR _____
OPERATION Drlg w/ Bit #12

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 40-45 RPM 65 PP 2300 SPM _____ LAG 78 @ 6862

MUD 6893 WT 9.2 VIS 40 WL 14.0 CK 2 PH 10.0 CL 4200 Fe/Ca 120
SURVEYS _____
6850 - 3 1/2

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 3

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED BV @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 43 DATE 10 Feb 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 6893 TODAY 7023 FTG 130 FT/HR _____
 OPERATION Drlg W/ Bit #12

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 35140 RPM 65 PP 2300 SPM _____ LAG _____ @ _____

MUD 7020 WT 9.1 VIS 40 WL 12.5 CK 2 PH 10.3 CL 4400 Fe/Ca 120
 SURVEYS _____
6851 3 1/2

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 2-3

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED BV @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 44 DATE 11 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 7023 TODAY 7054 FTG 31 FT/HR _____
 OPERATION Drig at 6:00 a.m.
Collars laydown 9" X 0, Reamer

BIT NO. 12 TYPE STC F-4 IN 6138 OUT 7054 FT. 916 HRS. 125
 BIT NO. 13 TYPE F-3 IN 7054 OUT _____ FT. _____ HRS. _____
 WOB 35 RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 7054 WT 9.3 VIS 37 WL 14.5 CK 2 PH 10.3 CL 2800 Fe/Ca 120
 SURVEYS
7011 - 3 1/4 (7041 3 3/4) Dropped?? on trip

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 2-3

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

48

TEMP _____ SPUD _____ DAY 45 DATE 12 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 7054 TODAY 7198 FTG 144 FT/HR _____
 OPERATION Drlg W/ Bit #13

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 35 RPM 75 - 85 PP 2250 SPM _____ LAG 78 @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY Interbedded, green to white, sandstone and limestone
(Dolomite) Trip gas 175 units.

MUD GAS _____ TG 175 6586 6597 (only break we had) BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

R.S. 303 841 5504

CALLED BV 303 973-4209 @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

49

TEMP _____ SPUD _____ DAY 46 DATE 13 Feb 84
COMPANY Ladd Petroleum
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 7198 TODAY 7218 FTG 23 FT/HR _____
OPERATION Drlg W/Bit #13

BIT NO. 13 TYPE STC F-3 IN 7054 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 35 RPM 60 PP 2300 SPM _____ LAG _____ @ _____

MUD 7214 WT 9.2 VIS 46 WL 14.0 CK 2 PH 10.4 CL 2100 Fe/Ca 130
SURVEYS _____
7168 4 3/4

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

7213=7196 17' uphole

MUD GAS _____ TG 6 BACKGROUND 2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 800-525-6655 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 47 DATE 14 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 7218 TODAY 7322 FTG 104 FT/HR _____
 OPERATION Drlg W/ Bit #13

BIT NO. 13 TYPE STC F-3 IN 7054 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 35 RPM 60-65 PP 2300 SPM _____ LAG _____ @ _____

MUD 7320 WT 9.2 VIS 47 WL 11.0 CK 2 PH 11.0 CL 2000 Fe/Ca 130
 SURVEYS _____
7245 - 4 1/2
7310 4 1/2

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____
7321 - 33 35m/
9-10 M/ft before
4-5 m/ft during

MUD GAS _____ TG _____ BACKGROUND 2-3
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS None 7321 - 311

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

51

TEMP _____ SPUD _____ DAY 48 DATE 15 Feb 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 7322 TODAY 7461 FTG 139 FT/HR _____OPERATION Drlg W/ Bit #13

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

7372 4 1/47346 4 1/2GEOLOGICAL

FORM TOPS _____

FORMATION HermosaLITHOLOGY Bleached arkose

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

HW

C1

C2

C3

C4

C5

FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

52

TEMP _____ SPUD _____ DAY 49 DATE 16 Feb 84
COMPANY Ladd Petroleum
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 7461 TODAY 7544 FTG 83 FT/HR _____
OPERATION Drlg W/ Bit #13

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB 35 RPM 50070 PP _____ SPM _____ LAG _____ @ _____

MUD 7544 WT 9.2 VIS 47 WL 13.2 CK 2 PH 10.5 CL 2400 Fe/Ca 100
SURVEYS _____
7500 4 3/4

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY Dark gray silty dolomicrite.

MUD GAS _____ TG _____ BACKGROUND 3-4

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

REMARKS _____

CALLED BV @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

53

TEMP _____ SPUD _____ DAY 50 DATE 17 Feb 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 7544 TODAY 7603 FTG 59 FT/HR _____
 OPERATION _____

~~Trip for Bit #14~~

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 7603 WT 9.0 VIS 43 WL 11.8 CK 2 PH 10.5 CL 2100 Fe/Ca 100

SURVEYS 7561 5 3/4

7563 - 6.0

7593 3 3/4

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 4-5

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

54

TEMP _____ SPUD _____ DAY 51 DATE _____

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 7603 TODAY 7642 FTG 39 FT/HR _____OPERATION Drlg w/ Bit #14 HTC J-44BIT NO. 14 TYPE HTC J-44 IN 7603 OUT _____ FT. _____ HRS. _____BIT NO. 13 TYPE STC F-3 IN 7054 OUT 7603 FT. 549 HRS. 123WOB 15 m RPM 80 PP 2300 SPM _____ LAG _____ @ _____MUD 7641 WT 9.2 VIS 49 WL 11/2 CK 2 PH 10.5 CL 2100 Fe/Ca 80SURVEYS 7609 - 6.0GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 6-7

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED RS and BV @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 52 DATE 19 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 7642 TODAY 7723 FTG 81 FT/HR _____
 OPERATION Drlg W/ Bit #14

BIT NO. 14 TYPE HTC J-44 IN 7603 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 23M RPM 55-80 PP 2350 SPM _____ LAG _____ @ _____

MUD 7716 WT 9.2 VIS 46 WL 12.0 CK 2 PH 9.8 CL 2200 Fe/Ca 100

SURVEYS _____
7641 5 1/2
7704 5.0

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY Dolomite - medium to dark gray, silty, shaley,
7680 - 90 1 Fragment sandstone with asphaltic stain no cut
no gas

MUD GAS _____ TG _____ BACKGROUND 4

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B V 800-525-6655 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

56

TEMP _____ SPUD _____ DAY 53 DATE 20 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 7723 TODAY 7527 FTG 104 FT/HR _____
 OPERATION Drilg W/ Bit #14 HTC J-44

BIT NO. 14 TYPE JTC J-44 IN 7603 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 20M RPM 70-80 PP 2350 SPM _____ LAG _____ @ _____

MUD 7823 WT 9.2 VIS 50 WL 11.2 CK 2 PH 10.5 CL 2300 Fe/Ca 120
 SURVEYS 7764 - 5.0

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 4-6

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

57

TEMP _____ SPUD _____ DAY 54 DATE 21 Feb 84
COMPANY Ladd Petroleum
WELL Salt Valley #1
LOCATION _____

DEPTH YEST. 7827 TODAY 7872 FTG 45 FT/HR _____
OPERATION Trip for Bit #15

BIT NO. 14 TYPE HTC J-44 IN 7603 OUT 7872 FT. 269 HRS. 71½
BIT NO. 15 TYPE HTC J-55 IN 7872 OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 7872 WT 9.2 VIS 46 WL 11.8 CK 2 PH 10.8 CL 2200Fe/Ca80
SURVEYS 7831 5.0
7872 4½

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 9

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

58

TEMP _____ SPUD _____ DAY 55 DATE 22 Feb 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 7872 TODAY 7854 FTG 82 FT/HR _____OPERATION Drlg with Bit #15BIT NO. 15 TYPE _____ IN 7872 OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB 20 RPM 70-80 PP 2350 SPM _____ LAG _____ @ _____MUD 7952 WT 9.3 VIS 4.9 WL 11.8 CK 2 PH 10.8 CL 2400 Fe/Ca 80SURVEYS 7896 - 4 3/4GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 11-12

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 56 DATE 23 Feb 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 7954 TODAY 8049 FTG 95 FT/HR _____
 OPERATION Drilg with Bit #15

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 22M RPM 7580 PP _____ SPM _____ LAG 92 @ 8033

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____
7959 4.0
8023 - 3 3/4

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 12

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

60

TEMP _____ SPUD _____ DAY 57 DATE 24 Feb

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8049 TODAY 8099 FTG 50 FT/HR _____OPERATION Drlg w/ Bit #16BIT NO. 15 TYPE J-55-R IN 7872 OUT 8093 FT. 221 HRS. 51BIT NO. 16 TYPE STC F-57 IN 8093 OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 8093 WT 9.3 VIS 53 WL 12.4 CK 2 PH 10.3 CL 11900 Fe/Ca 50SURVEYS 8085 4½GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 12

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS Packed BHANo No₃ test yet use chromatars

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

61

TEMP _____ SPUD _____ DAY 58 DATE 25 Feb 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8099 TODAY 8201 FTG 102 FT/HR _____

OPERATION Drlg w/ bit #16

BIT NO. 16 TYPE STC F-57 IN 8093 OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB 40 RPM 60 PP 2400 SPM _____ LAG 92 @ 8053

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

8110 3 3/4

8170 4.0

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND TD

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____	LITHOLOGY _____	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

62

TEMP _____ SPUD _____ DAY 59 DATE 26 Feb 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8201 TODAY 8272 FTG 71 FT/HR _____OPERATION Drilg w/ bit #16BIT NO. 16 TYPE STC F-57 IN 8093 OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB 45 m RPM 60 PP 2350 SPM _____ LAG _____ @ _____MUD 8271 WT 9.2 VIS 51 WL 11.2 CK 2 PH 10.3 CL 2000 Fe/Ca 40

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION HermosaLITHOLOGY Limestone - medium to dark gray, micritic, very silty,
very cherty.MUD GAS _____ TG _____ BACKGROUND 10

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

HW	C1	C2	C3	C4	C5	FLOU

REMARKS Ken Ballard, IMCO Muc Engineer relates that he has
never heard of using cromates as a tracerCALLED BV RS @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

63

TEMP _____ SPUD _____ DAY 60 DATE 27 Feb 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 8272 TODAY 8294 FTG 22 FT/HR _____
 OPERATION Drilg W/ Bit #17

BIT NO. 16 TYPE STC F-57 IN 8093 OUT 8227 FT. 184 HRS. 50
 BIT NO. 17 TYPE J-44 IN 8272 OUT _____ FT. _____ HRS. _____
 WOB 40 RPM 60 PP 2300 SPM _____ LAG 97 @ 8272

MUD 829 WT 9.2 VIS 49 WL 12/4 CK 2 PH 10.3 CL 2000 Fe/Ca 120
 SURVEYS 8260 4 1/2 Chromates 600

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY 15-20 -7Minft -22
9 - 15 - 11

MUD GAS _____ TG _____ BACKGROUND TT

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORTTEMP _____ SPUD _____ DAY 61 DATE 28 Feb 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8294 TODAY 8335 FTG 41 FT/HR _____OPERATION Make up test tool for DST #1

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 835 WT 9.2 VIS 56 WL 14.0 CK 2 PH 10.6 CL 3600 Fe/Ca 80

SURVEYS _____ Chromates 600

Nitrates 100

GEOLOGICAL

FORM TOPS _____

FORMATION Hermosa

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

HW

C1

C2

C3

C4

C5

FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 62 DATE 29 Feb 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 8335 TODAY 8384 FTG 49 FT/HR _____
 OPERATION Circ Spls - wait for Mud Engineer

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____
midnight

MUD _____ WT 9.3 VIS 63 WL 14.0 CK 2 PH 10.2 CL _____ Fe/Ca 320
 SURVEYS 8349 4.0

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY 8370-80 Shale - red to orange,

MUD GAS _____ TG 15 BACKGROUND 8

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS. DST #118320-351 Drilled 8336 w/1100 psi pump press at
3½ - 4 min/ft, 8360 w/2250 psi at 2 - 2½ min/ft, pick up and circ.

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

66

TEMP _____ SPUD _____ DAY 63 DATE 1 March 84
 COMPANY Ladd Petroleum
 WELL Salt Valley #1
 LOCATION _____

DEPTH YEST. 8384 TODAY 8486 FTG 102 FT/HR _____
 OPERATION Drilg

BIT NO. 17 TYPE J-44 IN 8777 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 8482 WT 9.1 VIS 49 WL 19.0 CK 2 PH 10.2 CL 15000 Fe/Ca 400
 SURVEYS _____ Chromates 500

GEOLOGICAL

FORM TOPS _____

FORMATION Paradox - predominately dark gray to black micrite with
some light gray, marly Limestone

LITHOLOGY _____

8387 8450 400ppm 2 CO₂
8450 8475 800 ppm

MUD GAS _____ TG _____ BACKGROUND 9

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS. RS 841-5584

CALLED BV @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORTTEMP _____ SPUD _____ DAY 64 DATE 2 March 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8486 TODAY 8614 FTG 133 FT/HR _____OPERATION Drlg w/ Bit #17BIT NO. 17 TYPE J-44 IN 8277 OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB 40 RPM 60 PP 8225 SPM _____ LAG 103 @ 8550MUD 8614 WT 9.1 VIS 49 WL 18 CK 2 PH 10.0 CL 18000 Fe/Ca 630

SURVEYS _____ Chromater 5000

8260 - 4 1/28349 - 4.08476 - 3 3/4GEOLOGICAL

FORM TOPS _____

FORMATION Paradox Lower Ismay 8440Desert Creek 8570

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

68

TEMP _____ SPUD _____ DAY 65 DATE 3 March 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 8619 TODAY 8763 FTG _____ FT/HR _____
 OPERATION _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____
8635 4 1/4

GEOLOGICAL

FORM TOPS Salt

FORMATION _____

LITHOLOGY _____

BV 973-4209

RS 841 5584

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

Dresser Atlas 801-722-3627

Jones 505 325 5068

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

69

TEMP _____ SPUD _____ DAY 66 DATE 4 March 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8763 TODAY 8763 FTG _____ FT/HR _____

OPERATION Logging with Sehl

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____	LITHOLOGY _____	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

70

TEMP _____ SPUD _____ DAY _____ 67 _____ DATE 5 March 84
COMPANY _____
WELL _____
LOCATION _____

DEPTH YEST. 8763 TODAY 8763 FTG _____ FT/HR _____
OPERATION Running 9/38 Casing
Mud loggers on Standby

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

71

TEMP _____ SPUD _____ DAY 68 DATE 6 Mar 84
COMPANY _____
WELL _____
LOCATION _____

DEPTH YEST. 8763 TODAY 8763 FTG _____ FT/HR _____
OPERATION Nipple up

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

72

TEMP _____ SPUD _____ DAY 69 DATE 7 Mar 84
COMPANY _____
WELL _____
LOCATION _____

DEPTH YEST. 8763 TODAY 8763 FTG _____ FT/HR _____
OPERATION Change out mud system to saturated salt

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

73

TEMP _____ SPUD _____ DAY 70 DATE 8 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 8763 TODAY 8778 FTG 15 FT/HR _____OPERATION Drlg Cmt.

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Paradox Salt

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

74

TEMP _____ SPUD _____ DAY 71 DATE 9 March 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 8778 TODAY 8941 FTG 163 FT/HR _____
 OPERATION Drlg W/ Bit #18 STC V2HJ

BIT NO. 17 TYPE J-144 IN 8277 OUT 8763 FT. 486 HRS. 7.34
 BIT NO. 18 TYPE 8 1/2 STC IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG 87 @ 8906

MUD 8941 WT 10.2 VIS 40 WL 64 CK 3 PH 10.0 CL 181 Fe/Ca 680
 SURVEYS _____
Salt 299,000

GEOLOGICAL

FORM TOPS _____

FORMATION Paradox Salt

LITHOLOGY Salt, Siltstone - Shale, clear, white; brown light tan; dark gray

MUD GAS _____ TG _____ BACKGROUND 4-5
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

75

TEMP _____ SPUD _____ DAY 72 DATE 10 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 8941 TODAY 9159 FTG 218 FT/HR _____
 OPERATION Drlg w/Bit #19

BIT NO. 18 TYPE STC V2HJ IN 8763 OUT 9033 FT. 270 HRS. 33½
 BIT NO. 15 TYPE STC F-2 IN 9033 OUT _____ FT. _____ HRS. _____
 WOB 15-18 RPM 50 PP 1550 SPM _____ LAG 89 @ 9064

MUD 9141 WT 10.2 VIS 38 WL 48 CK 3 PH 8.0 CL 197 Fe/Ca 1880
 SURVEYS 8893 - 4½

Salt - Chloride # X 1.65

GEOLOGICAL

FORM TOPS _____

FORMATION Paradox

LITHOLOGY Very Poor Samples

MUD GAS _____ TG _____ BACKGROUND 3-4

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED B.V. 303 620-0278 @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 73 DATE 11 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 9159 TODAY 9271 FTG 212 FT/HR _____
 OPERATION Drlg W/Bit #19

BIT NO. 19 TYPE STC F-2 IN 9033 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 15/22 RPM 50 PP 1550 SPM _____ LAG 89 @ 8064

MUD 9365 WT 10.2 VIS 40 WL 24 CK 2 PH 8 CL 198 Fe/Ca 2660
 SURVEYS 9023 3 3/4 Salt 326 M
9118 3 1/2
9276 3 3/4

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY Reverse Drlg Break 9302 - 9345
2 1/2 - 15-20 m/ft - 7-8 m/ft.
No Show

MUD GAS _____ TG _____ BACKGROUND 3

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

BV 303 973-4209

RS 303-841-5584

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

77

TEMP _____ SPUD _____ DAY 74 DATE 12 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 9374 TODAY 9610 FTG 239 FT/HR _____
 OPERATION Drlg W/ Bit #19

BIT NO. 19 TYPE F-2 IN 9033 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 15/22 RPM 50 PP 1550 SPM _____ LAG _____ @ _____

MUD 9607 WT 10.0 VIS 39 WL 19.2 CK 2 PH 8 CL 197M Fe/Ca 2400
 SURVEYS _____
9436 4 1/2

GEOLOGICAL

FORM TOPS _____

FORMATION Paradox - Salt

LITHOLOGY 9500-93 Shale 4 - 5 Min/ft
9593 - begin slow day to 15-30 min ft.

MUD GAS _____ TG _____ BACKGROUND 3-4
 ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 75 DATE 13 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 9610 TODAY 9798 FTG 188 FT/HR _____
 OPERATION Drlg w/Bit #19

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 15/22 RPM 50 PP 16000 SPM _____ LAG _____ @ _____

MUD 9798 WT 10.3 VIS 59 WL 22 CK 2 PH 6.8 CL 192 m Fe/Ca 2400
 SURVEYS _____ Strip _____ Salt 316,800
9595 4 1/4 Chromater 600

GEOLOGICAL

FORM TOPS _____

FORMATION Paradox 9685 - 9730 Clstc and Anhy
9730 - 90 Salt
 LITHOLOGY 90-9800 Anhydrite
9800 - Salt

MUD GAS _____ TG _____ BACKGROUND 2
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____
RS 303 694 3441

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORTTEMP _____ SPUD _____ DAY 76 DATE 14 Mar 84

COMPANY _____

WELL _____

LOCATION _____

_____ 10064
DEPTH YEST. 9798 TODAY 10064 FTG 266 FT/HR _____OPERATION 266
Drlg #19 _____BIT NO. 19 TYPE F-2 IN 9033 OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB 25M RPM 50 PP 1600 SPM _____ LAG _____ @ _____MUD 10048 WT 10.3 VIS 37 WL 15.6 CK 2 PH 7.4 CL 264 Fe/Ca 2400SURVEYS _____ Salt 435,6009785 - 4 1/49943 4 1/2GEOLOGICAL

FORM TOPS _____

FORMATION ParadoxLITHOLOGY Silt 9889Anhy & Sh 9889 9921Salt 9921 - 9988Salt & Anhy 9988 - 10021Anhy & Sh 10021 - 10048Salt 10048MUD GAS _____ TG _____ BACKGROUND 1-2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

80

TEMP _____ SPUD _____ DAY 77 DATE 15 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 10064 TODAY 10402 FTG 38 FT/HR _____
 OPERATION Drlg W/Bit #19

BIT NO. 19 TYPE F-2 IN 9033 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 20M RPM 50 PP 1650 SPM _____ LAG _____ @ _____

MUD 10,397 WT _____ VIS 10.3 WL 39 CK 13.2 PH 7.2 CL 186 Fe/Ca 2080
 SURF 10,392 4 1/4 - 10102 Salt 306900
16,259 4 1/4

GEOLOGICAL

FORM TOPS Pinkerton Trail 10364

FORMATION pinkerton Trail

LITHOLOGY Salt 10048 - 10364 Blk micrite

MUD GAS _____ TG _____ BACKGROUND 2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORTTEMP _____ SPUD _____ DAY 78 DATE 16 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 10402 TODAY 10478 FTG 76 FT/HR _____

OPERATION _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB 25 RPM 50 PP 1650 SPM _____ LAG _____ @ _____MUD 10472 WT 10.2 VIS 37 WL 12.4 CK 2 PH 8.0 CL 228 Fe/Ca 2080SURVEYS _____ Salt 376,200GEOLOGICAL

FORM TOPS _____ 10460 LS, LtTan, Dnse

FORMATION Pinkerton Trail

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 1 1/2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLUO

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

82

TEMP _____ SPUD _____ DAY 80 DATE 18 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 10518 TODAY 10520 FTG 2 FT/HR _____

OPERATION _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION LeadvilleLITHOLOGY Logging w/ Schlumberger - broken conductor in
wineline of 1st truck; call another truck from Farmington w/ 2nd truck.

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORTTEMP _____ SPUD _____ DAY 81 DATE 14 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. _____ TODAY 10520 FTG _____ FT/HR _____

OPERATION _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY Running Liner (7 3/4)Trip Gas 11 units

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY

	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

84

TEMP _____ SPUD _____ DAY 82 DATE 20 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. _____ TODAY 10520 FTG _____ FT/HR _____

OPERATION _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 10520 WT 10.3 VIS 38 WL 16.8 CK 2 PH 8.0 CL 19 Fe/Ca 2000SURVEYS _____ Salt 315,150GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY Top of Liner 8393

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

85

TEMP _____ SPUD _____ DAY 83 DATE 21 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. _____ TODAY 10520 FTG _____ FT/HR _____

OPERATION _____

Drlg Cmt and Float Collog

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 10520 WT 10.3 VIS 37 WL 19.2 CK 2 PH 8.0 CL 192 Fe/Ca 2400
SURVEYS Salt 316800GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 84 DATE 23 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 10543 TODAY 10620 FTG 77 FT/HR _____
 OPERATION Drlg W/ Bit 21

BIT NO. 21 TYPE HTC 5-3 IN 10520 OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 15 RPM 60 PP 1400 SPM _____ LAG _____ @ _____

MUD 10620 WT 8.7 VIS 38 WL 9.2 CK 2 PH 10.8 CL 3500 Fe/Ca tr
 SURVEYS 10,568

GEOLOGICAL

FORM TOPS _____

FORMATION Leadville

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 3

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY

HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 85 DATE 24 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 10620 TODAY _____ FTG _____ FT/HR _____
 OPERATION Drlg W/ Bit #27

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____
 SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Leadville

LITHOLOGY _____

MUD GAS _____ TG none BACKGROUND 3

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

MND 10790

TEMP _____ SPUD _____ DAY 86 DATE 25 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. _____ TODAY 10790 FTG _____ FT/HR _____OPERATION Trip in w/DIS #2

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 10790 WT 8.7 VIS 39 WL 9.0 CK 2 PH 10.6 CL 3000 Fe/Ca Tr

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION _____

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 87 DATE 26 Mar
COMPANY _____
WELL _____
LOCATION _____

DEPTH YEST. 10790 TODAY 10824 FTG 34 FT/HR _____
OPERATION Drlg W/ Bit #22

BIT NO. 72 TYPE 6 1/2 J IN 10.620 OUT _____ FT. _____ HRS. _____
BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 10819 WT 8.7 VIS 37 WL 9.8 CK 2 PH 10.3 CL 2800 Fe/Ca tr
SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Leadville

LITHOLOGY _____

MUD GAS _____ TG none BACKGROUND 2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 88 DATE 27 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 10824 TODAY 10976 FTG 152 FT/HR _____
 OPERATION _____
Drlg W/ Bit #22

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD 10972 WT 8.7 VIS 39 WL 8.8 CK 2 PH 0.6 CB 400 Fe/Ca tr
 SURVEYS 10855

GEOLOGICAL

FORM TOPS _____

FORMATION Leadville

LITHOLOGY No Show
Brown Dolomite - break 10900 - 34

MUD GAS _____ TG _____ BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

91

TEMP _____ SPUD _____ DAY 89 DATE 28 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 10976 TODAY 11056 FTG 80 FT/HR _____OPERATION Drlg w/Bit #23BIT NO. 22 TYPE STC J-44 IN _____ OUT 11024 FT. 408 HRS. 61BIT NO. 23 TYPE STC F-4 IN _____ OUT _____ FT. _____ HRS. _____WOB 15 RPM 60 PP 1550 SPM _____ LAG _____ @ _____MUD 11052 WT 8.8 VIS 38 WL 10.2 CK 2 PH 10.6 CL 2800 Fe/Ca tr

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Leadville - medium to dark brown Dolomite

LITHOLOGY _____

MUD GAS _____ TGrone _____ BACKGROUND 2

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH _____ LITHOLOGY _____

HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 90 DATE 29 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 11056 TODAY 11193 FTG 137 FT/HR _____
 OPERATION Drlg W/ Bit #23 STC F-4

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 15 RPM 60 PP 1550 SPM _____ LAG 81 @ 10381

MUD 11190 WT 8.8 VIS 42 WL 9.8 CK 2 PH 11.7 CL 2800 Fe/Ca tr
 SURVEYS _____

FORM TOPS Duran 11.060 Elbert 11,163 GEOLOGICAL

FORMATION ls - lt - mbrn
SH grn, waxy
 LITHOLOGY Dolo - lt, m brn

MUD GAS _____ TG _____ BACKGROUND _____
 ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED Norm King @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

TEMP _____ SPUD _____ DAY 91 DATE 30 Mar 84
 COMPANY _____
 WELL _____
 LOCATION _____

DEPTH YEST. 11193 TODAY 11292 FTG 99 FT/HR _____
 OPERATION Drilg W/Bit #23

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____
 WOB 15 RPM 60 PP 1550 SPM _____ LAG _____ @ _____

MUD 11286 WT 8.6 VIS 47 WL 11.6 CK 2 PH 11.5 CL 3000 Fe/Ca tr
 SURVEYS _____

GEOLOGICAL

FORM TOPS McCracken 11,235
Aneth - 11,266

FORMATION Aneth - brown Dolomite with Trace Anhydrite, slightly silty,
sandy, trace green, shale

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND 1
 ZONE OF INTEREST NO. _____ @ _____ TO _____
 SHOWS-BREAKS None

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

CALLED Norm King @ _____ DATE _____
 GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DAILY REPORT

94

TEMP _____ SPUD _____ DAY 92 DATE 31 Mar 84

COMPANY _____

WELL _____

LOCATION _____

DEPTH YEST. 11292 TODAY 11330 FTG 38 FT/HR _____OPERATION Logging with Schlumberger

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

BIT NO. _____ TYPE _____ IN _____ OUT _____ FT. _____ HRS. _____

WOB _____ RPM _____ PP _____ SPM _____ LAG _____ @ _____

MUD _____ WT _____ VIS _____ WL _____ CK _____ PH _____ CL _____ Fe/Ca _____

SURVEYS _____

GEOLOGICAL

FORM TOPS _____

FORMATION Aneth

LITHOLOGY _____

MUD GAS _____ TG _____ BACKGROUND _____

ZONE OF INTEREST NO. _____ @ _____ TO _____

SHOWS-BREAKS _____

DEPTH	LITHOLOGY	HW	C1	C2	C3	C4	C5	FLOU

REMARKS _____

I.D. Well 11,330

CALLED _____ @ _____ DATE _____

GEOLOGY _____ LOGGING _____ MILEAGE _____ EXP _____

DST #1 8320-8336

Formation: Paradox Hole Size: 12 1/4

Test Type: Conventional Dual Packer

Testing Company: Halliburton, Farmington, N. N.
Jim Robinson

Mud Properties: Wt. 9.2 Vis. 40 Rm. 2.62 @ 89 F.

Water Cushion: None

Top Choke: 1/8" Bubble Hose

Bottom Choke: 3/4"

Flow No. 1: 15 min.
Shut in No. 1: 30 min.
Flow No 2: 60 min.
Shut in No 2 120 min.

Description: Open tool at 9:47 a.m., 28 February, 1984. Open #1 with weak bubble increasing for 2 inches after 15 minutes. Shut in for 30 minutes.

Open #2 with very weak bubble increasing to 1/2 inch at 60 minutes. Shut in for 120.

DST #1 8320-8336

Pressures

Top Chart - inside

1 H	4005.3
F H	3992.1
Preflow	40.0 - 53.4
ISI	586.0
Final Flow	53.4 - 66.7
FST	612.5

Bottom Chart - Outside

1H 4036.2
FH 4004.1
Preflow 53.5 - 66.9
ISI 587.6
Final Flow 66.9 - 80.3
FSI 627.4
BHT 132 F.

Recovery: 100' Drilling Mud

Top Sample Rw 1.74 @ 75 F
Bottom Sample Rw 1.02 @ 75 F

Sample Chamber:

Pressure 5 psi
Mud 220 cc Rw .72 @ 75 F

DST #2 10768 - 10790

March 25, 1984

Formation: Leadville

Hole Size: 6 1/2

Test Type: Conventional Dual Packer

Testing Company: Halliburton, Farmington, N.M.
H. Bell

Mud Properties: Wt. 8.7 Vis. 37 Rm. 1.13 @ 77 F

Water Cusion: None

Top Choke: 1/8" Bubble Hose

Bottom Choke: 3/4"

Flow No. 1 15 min

Shut #1 30 min

Flow No 2 60 min

Shut In No 2 120 min

Description: None made by tester

Pressures:

Top Chart - inside

I H 4828.0

F H 4828.0

Preflow -1299.6

ISI 4742.0

Final Flow 1515.1 - 3537.7

FSI 4828

Bottom Chart - Outside

IH 4839.0

FH 4839.0

Preflow 213.7 - 1533.9

ISI 4796.9

Final Flow 1533.9 - 3610.2

FSI 4754.3

BHT 168

Recovery: 920 Ft. gas and water cut mud.
7100 Ft. gas gas cut water.

Top	66,100 ppm	Chlorides
Middle	138,000 ppm	Chlorides
Bottom	140,200 ppm	Chlorides

Sample Chamber

20 psi

1400 cc Salt Water

LADD PETROLEUM CORPORATION
SALT VALLEY #1

2700-2710	90%	Siltstone, light orange to light red-brown, medium well cemented calcareous slight grading to very fine grained Sandstone; very sandy.
	10%	Sandstone - light orange to light red-brown, medium well cemented calcareous very silty.
2710-2720	90%	Siltstone - as Above.
	10%	Sandstone - as Above.
2720-2730	50%	Sandstone - as Above.
	50%	Siltstone - as Above.
	Trace	Limestone - cream, dense and cryptocrystalline nodules.
2730-2740	80%	Sandstone - as Above.
	20%	Siltstone - as Above.
	Trace	Shale - pastel green.
2740-2750	60%	Siltstone - becoming brick red, very sandy calcareous.
	20%	Sandstone - light orange, very fine grained, loose.
	20%	Shale - pastel green, very slightly calcareous well indurated.
2750-2760	100%	Siltstone - brick red, hard, slightly calcareous, sandy.
	Trace	Limestone - nodules as Above.
2760-2770	100%	Siltstone - as above some with green mottling, some with medium to coarse grained quartz inclusions Some with Limestone nodules included.

2770-2780	100%	Siltstone - brick red as above with inclusions as above.
2780-2790	100%	Siltstone - as above.
2790-2800	100%	Siltstone - as above.
2800-2810	100%	Siltstone - brick red, some sandy, firm, slightly calcareous with trace pink Limestone nodules, Trace green Shale.
2810-2820		As Above.
2820-2830		As Above.
2830-2840		As Above.
2840-2850		As Above.
2850-2860		As Above.
2860-2870		As Above.
2880-2890		As Above.
2890-2900		As Above.
2900-2910		As Above.
2910-2920		No Sample.
2920-2930		No Sample.
2930-2940	100%	Siltstone - brick red, firm, slightly calcareous, some with very fine grained Sandstone interlamination.
	Trace	Mudstone - green, firm.
2940-2950	100%	Siltstone - as above.
2950-2960	100%	Siltstone - brick red, firm, slightly calcareous, sandy in part.
2960-2970		As Above.
2970-2980		As Above.
2990-3000		As Above.
3000-3010	100%	Siltstone - brick red, firm, slightly calcareous, Shaley in part, sandy in part, trace green Mudstone.

3010-3020	80%	Siltstone - As Above.
	20%	Sandstone - red-brown, very fine grained, firm slightly calcareous, arkosic, micaceous, very silty.
3020-3030	60%	Siltstone - as above.
	40%	Sandstone - as above.
3030-3040	80%	Siltstone - as above.
	20%	Sandstone - as above.
3040-3050	90%	Sandstone - as above.
	10%	Siltstone - as above.
3050-3060	90%	Sandstone - as above.
	10%	Siltstone - as above.
3060-3070	60%	Siltstone - red-brown to brown, firm, slightly calcareous, some yellow-brown, firm, sandy.
3070-3080	20%	Siltstone - red-brown as above. Some very sandy.
	80%	Siltstone - green, firm, dolomitic as above; with some grading to very calcareous Mudstone.
3080-3090	40%	Siltstone - red-brown as above.
	60%	Siltstone - gray-green; dolomitic as above.
3090-3100	20%	Siltstone - red-brown as above.
	80%	Siltstone - gray-green as above.
3100-3110	100%	Siltstone - brown, firm, calcareous to dolomitic with very abundant very fine grained Quartz grain inclusions some with very limey inclusions; some with very fine grained Sandstone.
3110-3120	100%	Siltstone - as above. Trace green Mudstone inclusion.
3120-3130	100%	Siltstone - brown, Dolomite as above.
3130-3140	100%	Siltstone - brown dolomitic as above with trace green Mudstone inclusions.

3140-3150	100%	Siltstone - as above.
3150-3160	100%	Shale - brown, green, firm some silty, some calcareous to dolomitic. Trace very fine grained Sandstone.
3160-3170	100%	Shale - as above.
3170-3180	80%	Shale - as above becoming gray-brown with increasing green, some very silty.
3180-3190	20%	Shale - as above.
	80%	Sandstone - varicolored, very fine to fine grained, poor to medium cemented calcareous red, subangular, with some subrounded, some very silty.
3190-3200	90%	Sandstone - as above with increasing very light gray-green, very fine grained, well cemented, slightly calcareous.
	10%	Shale - as above.
3200-3210	100%	Sandstone - varicolored with abundant white, green, yellow, orange-red; predominately very fine to fine grained, subangular with some medium to coarse grained subrounded. Clear Quartz grains, medium to poor cemented, slightly calcareous with abundant loose grains, conglomeratic with trace dense loose nodules.
3210-3220	100%	Sandstone - varicolored conglomeratic, as above
3220-3230	100%	Sandstone - as above.
3230-3240	80%	Sandstone - as above.
	20%	Shale - brown, firm, very silty, grading to Siltstone.
3240-3250	60%	Sandstone - as above.
	40%	Shale - grading to Siltstone as above.
		Trace - cream Anhydrite, soft.
3250-3260	100%	Sandstone - varicolored, predominantly white, clear; very fine grained angular - subangular, loose, well sorted.
3260-3270	100%	Sandstone - as above; very angular with trace orange Chert, well sorted.

3270-3280	100%	Sandstone - as above; becoming poor to very poorly sorted with included medium to coarse grained loose Quartz grains. Some cream Mudstone?
3280-3290	100%	Sandstone - varicolored as above; becoming predominately medium to coarse grained, poorly sorted angular-subangular with some subrounded, predominately loose.
3290-3300	100%	Sandstone - predominately clear, frosted loose Quartz grains, medium to coarse, subangular; some with light orange stain, some angular, medium sorted.
3300-3310	70%	Sandstone - loose Quartz grains as above.
micaceous.	30%	Shale - brown, firm, very silty, very
3310-3320	20%	Sandstone - as above.
	80%	Shale - as above.
3320-3330	70%	Sandstone - as above.
	30%	Shale - as above. Some becoming red-brown.
3330-3340	40%	Sandstone - loose Quartz grains, fine to coarse grained, angular, poorly sorted..
	60%	Shale - brown, firm, very silty, very micaceous, some sandy, slightly calcareous.
3340-3350	80%	Shale - as above, predominantly red-brown.
	20%	Sandstone - as above.
3350-3360	90%	Shale - as above.
	10%	Sandstone - as above.
3360-3370	90%	Sandstone - light pink to light red-brown, very fine to fine grained subangular to angular, loose, some very fine grading to Siltstone.
	10%	Shale - as above.
3370-3380	100%	Sandstone - as above.
3380-3390	100%	Sandstone - as above, very fine grained, grading to Siltstone.
3390-3400	100%	Sandstone - light red-brown, very fine grained,

angular, loose.

3400-3410	100%	Sandstone - light red-brown, very fine grained, grading to Siltstone, subangular to angular, loose; trace green, firm, Siltstone.
3410-3420	100%	Sandstone - as above, grading to Siltstone.
3420-3430	90%	Siltstone - red-brown, firm - friable, slightly calcareous, abundant light green.
	10%	Sandstone - clear, loose quartz grains, very fine to medium grained, subangular.
3430-3440	90%	Siltstone - as above.
	10%	Sandstone - clear, loose quartz grains, very fine to medium grained, subangular
3440-3450	90%	Siltstone - as above.
	10%	Sandstone - loose as above.
3450-3460	70%	Siltstone - as above, with abundant loose quartz grains included.
	30%	Sandstone - as above, predominantly loose quartz grains, very fine to medium grained with some coarse grains, predominately subangular with some angular.
3460-3470	100%	Sandstone - red-orange, very fine grained with some fine to medium grains, medium sorted, subangular with some angular, loose. Trace orange Chert. Trace white Claystone.
3470-3480	100%	Sandstone - as above.
3480-3490	80%	Siltstone - red-brown to brick red, soft to firm, some very sandy. Trace green Siltstone.
	20%	Sandstone - as above, predominately loose. Trace Sandstone, light green, very fine grained subangular, friable.
3490-3500	70%	Siltstone - as above.
	30%	Sandstone - as above with increasing light green very fine grained subangular friable.
3500-3510	80%	Siltstone - red brown soft-firm, slightly calcareous, some loose quartz grains included.
	20%	Sandstone - predominately loose quartz grains

as above -with trace very light gray-green,
very fine grained friable, slightly calcareous.

3510-3520	80%	Siltstone -as above.
	10%	Sandstone - as above.
	10%	Shale - brick red, firm, micaceous in part.
3520-3530	40%	Siltstone - as above.
	60%	Shale - as above. Trace Sandstone as above, predominately loose quartz grains.
3530-3540	30%	Siltstone - as above.
	10%	Sandstone - predominately light green, very fine grained subangular, friable.
	60%	Shale - red-brown, firm, slightly calcareous.
3540-3550	60%	Siltstone - brown, firm, slightly calcareous, sandy, some with grading to very fine grained sandstone.
	40%	Sandstone - light red-brown, clear very fine grained to very coarse grained, very poor sorted, angular, loose, conglomeratic, trace Anhydrite, Chert, green trace - shale, purple - maroon, soft silty.
3550-3560	80%	Siltstone - brown, firm, slightly calcareous micaceous.
	10%	Sandstone - white, light green, very fine grained, subangular, firm.
	10%	Shale - brown, silty, firm with trace purple, soft.
3560-3570	80%	Siltstone - as above.
	10%	Sandstone - as above.
	10%	Shale - as above, with trace purple soft, as above.
3570-3580		As above - Very Poor Sample
3580-3590		As above - Very Poor Sample
3590-3600		As above - Very Poor Sample
3600-3610	50%	Siltstone - brown, firm, slightly calcareous,

micaceous.

	10%	Shale - brown, brown-red, silty, firm, slightly calcareous, trace purple, soft.
	40%	Sandstone - white, clear, frosted, light red-orange, very fine to very coarse grained. Very poorly sorted, predominately loose grained, angular, subrounded, with some very poor cemented clusters.
3610-3620	70%	Siltstone - as above with some pale green.
	10%	Shale - as above.
	20%	Sandstone - with some pale green, very fine grained moderately cemented.
3620-3630	40%	Siltstone - brown, brown to red, firm, very slightly calcareous, sandy in part, micaceous, some becoming light red-orange, very micaceous, trace light green.
3630-3640	100%	Siltstone - brown, brown-red, pale green, firm, silty, micaceous.
	Trace-	1% Sandstone - clear, Quartz greens, loose very fine to medium grained angular.
3640-3650	90%	Siltstone - as above with increasing pale green.
	10%	Sandstone - as above.
3650-3660	90%	Siltstone - red to brown, pale green, firm, micaceous in part, sandy in part.
	10%	Sandstone - white, pale orange, very fine grained subrounded, very friable with abundant loose grains.
	Trace	Shale - brick red, firm silty, micaceous.
3660-3670	90%	Siltstone - as above.
	10%	Sandstone - as above.
	Trace	Shale - as above.
3670-3680	100%	Siltstone - as above.
	Trace	1% Sandstone - as above. Trace Shale - as above, with trace purple, soft.

3680-3690	90%	Siltstone - as above, with some pale green, grading to very fine grained sandstone.
	10%	Sandstone - as above.
3690-3700	100%	Siltstone - as above.
	Trace	1% Sandstone - as above. Trace Shale - as above with some purple soft claystone.
3700-3710	100%	Siltstone - red-brown, pale green, as above.
	Trace	Sandstone - as above, predominately loose quartz grains.
3710-3720	100%	Siltstone - as above.
	Trace	Sandstone - as above. Trace - Shale - as above.
3720-3730	100%	Siltstone - as above.
3730-3740	90%	Siltstone - as above.
	10%	Sandstone - clear, light orange, very fine to fine grained, angular Quartz grains.
3740-3750	100%	Siltstone - red-brown, as above, with some grading to silty Shale.
3750-3760	100%	Siltstone - brown-red, firm, slightly calcareous, with some pale green, some grading to silty Shale, some with very micaceous, some with Quartz grain inclusions.
3760-3770	100%	Siltstone - as above.
	Trace	Sandstone - loose Quartz grains.
3770-3780	100%	Siltstone - as above.
3780-3790	100%	Siltstone - as above.
3790-3800	100%	Siltstone - as above, some becoming very sandy
3800-3810	100%	Siltstone - red-brown, with some pale green, sandy firm, slightly calcareous, micaceous.
3810-3820	100%	Siltstone - as above.
3820-3830	100%	Siltstone - as above.
3830-3840	100%	Siltstone - as above.

3840-3850	100%	Siltstone - as above.
3850-3860	100%	Siltstone - as above.
3860-3870	100%	Siltstone - as above with some becoming very micaceous. Trace brown-green, mottled Shale.
3870-3880	100%	Siltstone - as above.
3880-3890	100%	Siltstone - as above, with trace pale green, very fine grained Sandstone.
3900-3910	100%	Siltstone - as above
3910-3920	100%	Siltstone - as above. Trace brick red Shale.
3920-3930	100%	Siltstone - as above. Trace brown, firm, micaceous, shale.
3930-3940	60%	Siltstone - as above.
	40%	Shale - brown, firm, silty, very slightly calcareous, micaceous in part.
3840-3950	90%	Shale - as above, with some becoming brown-orange bentonitic.
	10%	Siltstone - as above.
3950-3960	100%	Shale - brown, firm, slightly calcareous, very silty, some grading to Siltstone. Trace brown-green, mottled. Trace soft, purple.
3960-3970	100%	Shale - as above.
3970-3980	100%	Shale - as above.
3900-4000	100%	Shale - as above.
4000-4010	100%	Shale - as above with some becoming soft, bentonitic.
4010-4020	100%	Shale - as above.
4020-4030	80%	Shale - as above.
	20%	Sandstone- white, very fine grained, sub-rounded, friable to firm, slightly calcareous.
4030-4040	100%	Shale - as above.
4040-4050	100%	Shale - as above, some very silty grading to Siltstone.

4050-4060	100%	Shale - red-brown, sandy, silty - as above.
4060-4070	100%	Shale - as above.
4080-4090	100%	Shale - as above.
4090-4100	100%	Shale - as above.
4100-4110	100%	Shale - red-brown, firm, very slightly calcareous, very silty, grading to siltstone, some very sandy. Trace - common pale green silty Shale.
4110-4120	100%	Shale - as above.
4120-4130	100%	Shale - as above.
4130-4140	100%	shale - as above.
4140-4150	100%	Shale - as above.
4150-4160	100%	Shale - as above.
	trace	Common white Sandstone, very fine grained friable
4160-4170	100%	Shale - as above, some micaceous.
4170-4180	100%	Shale - as above.
4180-4190	100%	Shale - as above. Trace Anhydrite inclusions, white, soft.
4190-4200	100%	Shale - as above.
4200-4210	100%	Shale - as above, some very micaceous.
4210-4220	100%	Shale - as above.
4220-4230	100%	Shale - as above.
4230-4240	100%	Shale - as above.
4240-4250	100%	Shale - as above, some very micaceous.
4250-4260	100%	Shale - as above.
4260-4270	100%	Shale - as above.
4270-4280	100%	Shale - as above, very sandy, very slightly micaceous in part.
4280-4290	100%	Shale - as above.

4290-4300-	100%	Shale - as above.
4300-4310	100%	Shale - red-brown, firm, very slightly calcareous, very silty, very sandy, some grading to sandy Siltstone, very micaceous.
4310-4320	100%	Shale - as above.
4320-4330	100%	Shale - as above.
4330-4340	100%	Shale - as above.
4340-4350	100%	Shale - as above.
4350-4360	100%	Shale - as above.
4360-4370	100%	Shale - as above.
4370-4380	100%	Shale - as above.
4380-4390	100%	Shale - as above. Trace Anhydrite inclusion, white, soft.
4390-4400	100%	Shale - as above. Trace Anhydrite inclusion, white soft.
4400-4410	100%	Shale - as above, with trace Anhydrite inclusion, white, soft.
4410-4420	100%	Shale - as above, with trace Anhydrite inclusions.
4420-4430	100%	Shale - as above, very silty, grading to Siltstone.
4430-4440	100%	Shale - as above.
4440-4450	100%	Shale - as above, very silty, grading to Siltstone.
4450-4460	60%	Siltstone - red-brown, firm, very slightly calcareous, arkosic, micaceous, sandy in part.
	40%	Sandstone - red-orange, clear, very fine to fine grained medium sorted, predominately subangular with some subrounded to rounded, very poorly cemented - loose.
4460-4470	90%	Siltstone - as above.
	10%	Sandstone - as above.
4470-4480	90%	Siltstone - as above.

	10%	Sandstone - as above.
4480-4490	100%	Siltstone - as above.
4490-4500	30%	Siltstone - as above.
	70%	Sandstone - red-orange, clear, some frosted, very fine to medium grained poorly sorted predominately subrounded to rounded, loose.
4500-4510	90%	Sandstone - very light orange - clear frosted, predominately fine to coarse grained, poorly sorted, with some very fine grained predominately subrounded with abundant well rounded, loose.
	10%	Siltstone - red-brown, firm, sandy.
4510-4520	90%	Siltstone - as above, with abundant micaceous.
	10%	Sandstone - red-orange, very fine to fine grained, medium sorted, subangular, loose.
4520-4530	90%	Sandstone - red-orange to light red-orange, with some clear frosted, very fine to coarse grained, poorly sorted, subangular to subrounded with coarse grained, well rounded loose.
4530-4540	100%	Sandstone - as above.
4540-4550	90%	Shale - brick red to red-brown, firm, very silty, micaceous, with trace Anhydrite inclusion, white, soft.
	10%	Sandstone - as above.
4550-4560	80%	Sandstone - as above.
	20%	Shale - very silty as above losing circulation.
4560-4570	90%	Shale - as above, very poor sample.
	10%	Shale - as above losing circulation.
4570-4580	100%	Sandstone - light orange to clear frosted, medium to coarse grained with some very coarse grained, rounded to well rounded, loose.
	Trace	Shale - as above.
4589-4590	90%	Sandstone - as above.

10% Shale - as above.

4600-4610 100% Sandstone - light orange - clear, frosted, very fine to medium grained, medium sorted, trace coarse to very coarse grained, well rounded, loose.

4610-4620 100% Sandstone - as above.

Trace Shale - red-brown, silty.

4620-4630 100% Sandstone - as above. Very poor sample, losing returns.

4630-4640 100% Sandstone - as above. Very poor sample, losing returns.

4640-4650 80% Sandstone - as above with increasing coarse to very coarse grained, loose.

20% Shale - red-brown, silty, firm to soft.

Trace Anhydrite inclusion, Trace Limestone, gray, dense, very silty.

NOTE: Lost Returns Completely between 4650 - 4660
Pick up to work pipe at 4661

4650-4660 100% Sandstone - orange-red, very fine to fine grained with some medium grained, well sorted, rounded to subrounded, loose, with trace - common Anhydrite, white, soft. Trace - common red-brown Shale partings.

4660-4670 100% Sandstone - as above.

4670-4680 100% Sandstone - as above.

4680-4690 100% Sandstone - as above.

4690-4700 100% Sandstone - as above.

4700-4710 100% Sandstone - red-orange, very fine to fine grained with some medium grained, medium sorted, rounded to subrounded, loose with trace common Anhydrite, white, soft.

4710-4730 No Sample

4720-4730 No Sample

Establish circulation with drilling mud.

4730-4740		Unreadable Sample. Predominate Cavings.
4740-4750	100%	Sandstone - red-orange, very fine to medium grained, medium sorted, predominately rounded to subrounded, very poor cement, very slightly to non-calcareous. Trace Anhydrite, white, soft.
4750-4760	100%	Sandstone - as above.
4760-4770	90%	Sandstone - as above. Trace Anhydrite - as above.
	10%	Shale - brown - red, firm, very silty.
4770-4780	100%	Shale - as above, becoming light orange-red.
4780-4790	100%	Sandstone - as above.
4790-4800	100%	Sandstone - as above.
4800-4810	90%	Sandstone - light orange to clear, some frosted, predominately fine to medium grained with some coarse grained, medium sorted, subangular - rounded very poorly cemented, non-calcareous, with abundant Anhydrite, white, soft.
	10%	Shale - gray-green, red-brown, silty, firm, non-calcareous to very slight calcareous.
4810-4820	100%	Shale - as above with common Anhydrite.
	Trace	Common Shale - as above.
4820-4830	100%	Sandstone - as above becoming bright orange - red. Common Shale partings.
4830-4840	100%	Shale - as above, with Anhydrite as above, some becoming pink.
4840-4850	100%	Sandstone - as above.
4850-4860	100%	Sandstone - as above.
4860-4870	100%	Sandstone - as above with some becoming brick red, very fine to fine grained very silty.
4870-4880	100%	Sandstone - as above with 20% becoming very fine to fine grained very silty, micaceous - as above. Anhydrite - as above.
4880-4890	100%	Sandstone - as above with 20% very fine to fine

grained very silty, micaceous.

4890-4500	100%	Sandstone - as above.
4900-4910	100%	Sandstone - light orange, fine to medium grained with trace coarse to very coarse grained subrounded to rounded, very poorly cemented, very slightly to non-calcareous, with Anhydrite matrix some red-brown, very fine grained, very silty, micaceous; abundant Anhydrite, white, light orange, soft.
4910-4920	100%	Sandstone - as above.
4920-4930	100%	Sandstone - as above. Anhydrite as above.
4930-4940	100%	Sandstone - as above.
4940-4950	100%	Sandstone - as above with increasing very coarse grained, clear frosted, well rounded.
4950-4960	100%	Sandstone - as above becoming poorly sorted with increasing Anhydrite matrix; increasing very fine to fine grained subangular.
4960-4970	100%	Sandstone - as above, poorly sorted- as above.
	Trace	Shale - brick red, firm, very silty.
4970-4980	100%	Sandstone - as above, with Anhydrite matrix - as above.
4980-4990	100%	Sandstone - as above.
4990-5000	100%	Sandstone - as above.
5000-5010	100%	Sandstone - light orange, fine to medium grained with some very fine grained, some coarse to very coarse grained, poorly sorted, predominately subangular to subrounded with some rounded to well rounded, predominately loose, with some very poorly cemented, with Anhydrite matrix; some very fine grained, some silty, micaceous; trace Siltstone, red-brown, firm, very slightly calcareous.
5010-5020	100%	Sandstone - as above.
5020-5030	100%	Sandstone - as above.
5030-5040	100%	Sandstone - as above.
5040-5050	100%	Sandstone - as above.

5050-5060	100%	Sandstone - as above.
5060-5070	100%	Sandstone - as above.
5070-5080	100%	Sandstone - as above. Trace - common Siltstone - very silty shale, brick red, firm. (Cavings?)
5080-5090	100%	Sandstone - as above.
5090-5100	100%	Sandstone - as above.
5100-5110	100%	Sandstone - as above, very poor sample.
5110-5120	100%	Sandstone - as above, abundant cavings.
5120-5130	100%	Sandstone - as above, abundant cavings.
5130-5140	100%	Sandstone - as above, abundant cavings.
5140-5150	100%	Sandstone - as above, very poor sample, abundant cavings.
5150-5160	100%	Sandstone - as above, very poor sample, abundant cavings.
5160-5170	100%	Sandstone - as above, very poor sample, abundant cavings.
5170-5180	100%	Sandstone - as above, very poor samples.
5180-5190	100%	Sandstone - as above.
5190-5200	100%	Sandstone - red-orange, fine to coarse grained, poorly sorted, predominately subangular - subrounded with some rounded grains, predominately loose Quartz grains, with some poorly cemented, with Anhydrite matrix; abundant Anhydrite, white, pink, soft. Abundant cavings.
5200-5210	100%	Sandstone - as above, very poor samples.
5210-5220	100%	Sandstone - as above, very poor samples, abundant cavings.
5220-5230	100%	Sandstone - as above.
5230-5240	100%	Sandstone - as above.
5240-5250	100%	Sandstone - as above.
5250-5260	100%	Sandstone - as above, some becoming very fine grained, micromicaceous, silty.

5260-5270	100%	Sandstone - as above, with increasing very fine grained micromicaceous, silty.
5270-5280	90%	Sandstone - as above, with very fine grained Sandstone as above.
	10%	Sandstone - orange - red, very fine to fine grained, very silty, micromicaceous, arkosic in part, Anhydritic.
5280-5290	90%	Sandstone - fine to coarse grained as above.
	10%	Sandstone - very fine to fine grained, slightly micaceous as above.
5290-5300	60%	Sandstone - fine to coarse grained - as above.
	40%	Sandstone - very fine grained silty - as above.
5300-5310	90%	Sandstone - orange-red, very fine grained, firm, very slightly calcareous. Anhydritic, silty, micromicaceous.
	10%	Sandstone - fine to coarse grained - as above.
5310-5320	100%	Sandstone - orange-red, very fine grained, silty, arkosic - as above.
5320-5330	100%	Sandstone - very fine grained, silty, arkosic - as above.
5330-5340	100%	Sandstone - as above.
5340-5350	10%	Sandstone - as above.
5350-5360	90%	Sandstone - red-orange, medium to coarse grained with some very coarse grains. Subrounded to well rounded, loose Quartz grains.
5350-5360	50%	Sandstone - red-orange, medium to coarse grained, subrounded to rounded, loose.
	50%	Sandstone - very fine to fine grained, silty, micaceous, arkosic, abundant Anhydrite, white, pink, light orange, soft.
5360-5370	100%	Sandstone - as above. Bimodal - as above.

5370-5380	100%	Sandstone - as above.	
5380-5390	100%	Sandstone - as above.	
5390-5400	100%	Sandstone - as above.	
5400-5410	100%	Sandstone - as above.	
5410-5420	100%	Sandstone - as above.	Anhydrite - as above.
5420-5430	100%	Sandstone - as above.	
5430-5440	100%	Sandstone - as above.	
5440-5450	100%	Sandstone - as above.	
5450-5460	100%	Sandstone - as above.	
5460-5470	100%	Sandstone - as above.	
5470-5480	100%	Sandstone - as above.	
5480-5490	100%	Sandstone - as above.	
5490-5500	100%	Sandstone - as above.	Anhydrite - as above.
5500-5510	100%	Sandstone - as above.	
5510-5520	100%	Sandstone - as above.	Bimodal.
5520-5530	100%	Sandstone - as above.	
5530-5540	100%	Sandstone - as above.	Anhydrite - as above.
5540-5550	100%	Sandstone - as above.	
5550-5560	100%	Sandstone - as above.	
5560-5570	100%	Sandstone - as above.	
5570-5580	100%	Sandstone - as above.	
5580-5590	100%	Sandstone - as above.	
5590-5600	100%	Sandstone - as above.	
5600-5610	100%	Sandstone - red-orange, bimodal; medium to coarse grained, rounded, loose quartz grains, and very fine grained, silty, arkosic, micaceous.	
5610-5620	100%	Sandstone - bimodal - as above.	
5620-5630	100%	Sandstone - bimodal - as above.	

5630-5640	100%	Sandstone - bimodal - as above.
5640-5650	100%	Sandstone - as above.
5650-5660	100%	Sandstone - as above.
5660-5670	100%	Sandstone - as above.
5670-5680	100%	Sandstone - as above.
5680-5690	100%	Sandstone - as above. Bimodal - as above with Anhydrite - as above.
5690-5700	100%	Sandstone - as above.
5700-5710	100%	Sandstone - as above.
5710-5720	100%	Sandstone - as above.
5720-5730	100%	Sandstone - as above.
5730-5740	100%	Sandstone - as above. Bimodal as above with Anhydrite - as above.
5740-5750	100%	Sandstone - as above, with trace brown shale silty micaceous increasing coarse to very coarse grained loose, quartz grains subangular to subrounded. Trace common very coarse grained granitic rock fragments, subangular to subrounded, sample becoming Conglomerate.
5760-5770	100%	Sandstone - as above, becoming, Conglomerate as above.
5770-5780	100%	Sandstone - as above with decreasing coarse to very coarse grained loose Quartz grains.
5780-5790	100%	Red-orange, bimodal; medium to coarse grained, rounded, loose quartz grains and very fine grained silty arkosic, micaceous.
5790-5800	100%	Sandstone - as above.
5800-5810	100%	Sandstone - red - orange predominately very fine grained, silty, micaceous, arkosic.
5810-5820	100%	Sandstone - bimodal - as above, with trace brown silty shale.
5820-5830	90%	Sandstone - as above.
	10%	Shale - brown, firm, silty, blocky.

5830-5840	80%	Sandstone - as above.
	20%	Shale - as above.
5840-5850	70%	Sandstone - as above.
	30%	Shale - as above.
5850-5860	10%	Sandstone - red-orange, very fine grained, silty, micaceous, arkosic.
	70%	Siltstone - red-orange, red-brown, firm, micro-micaceous, arkosic.
	20%	Shale - red-brown, red-orange, firm, silty, very slightly calcareous.
5860-5870	10%	Sandstone - as above.
	90%	Siltstone - as above.
	Trace	Common Shale - as above.
5870-5880	80%	Siltstone - as above.
	20%	Shale - as above.
	Trace	Common Shale - as above.
5880-5890	70%	Sandstone - orange-red, medium to coarse grained, subangular to subrounded, loose, with increasing coarse to very coarse grains.
	30%	Siltstone - red-orange, red-brown, firm, micro, micaceous, arkosic, some with Anhydrite inclusions.
	Trace	Common Shale - as above.
5890-5900	80%	Sandstone - as above, with some becoming very coarse grained Conglomerate.
	20%	Siltstone - as above.
5900-5910	70%	Sandstone - red-orange, medium to very coarse grained, subangular to subrounded, conglomeritic, arkosic, loose with trace granite rock fragment.
	20%	Siltstone - red-orange, firm, micromicaceous, arkosic.
	10%	Shale - red-orange, red-brown, firm, some very silty, some very micaceous, very slightly to

non-calcareous.

Trace Limestone - red-brown, pink, microcrystalline,
hard, dense, very silty.

5910-5920 90% Sandstone - as above.

10% Siltstone.

Trace Shale - as above.

Trace Limestone - as above.

5920-5930 80% Sandstone - as above.

20% Siltstone - as above.

Trace Shale - as above.

Trace Limestone - as above.

5930-5940 90% Sandstone - as above.

05% Siltstone - as above.

05% Shale - as above.

Trace Limestone - as above.

5940-5950 80% Sandstone - conglomerate - as above.

20% Siltstone - as above with Anhydrite matrix.

Trace Shale - as above.

Trace Limestone - as above.

5950-5960 90% Sandstone - red-orange, predominately medium to
coarse grained subangular to subrounded, loose
with abundant very coarse grained subangular
loose grains; Conglomeritic, arkosic.

5960-5970 80% Sandstone - red-orange, very conglomeritic.

10% Siltstone - as above.

10% Shale - as above.

5970-5980 70% Sandstone - conglomerate as above.

20% Siltstone - as above.

10% Shale - as above.

5980-5990	80%	Sandstone - as above, very conglomeritic, some very micaceous.
	10%	Siltstone - as above, some very micaceous.
	10%	Shale - as above.
5990-5600	90%	Sandstone - predominately medium to coarse grained with some very coarse grains.
	10%	Siltstone
	Trace	Common Shale - as above.
6000-6010	60%	Sandstone - conglomerate as above.
	20%	Siltstone - as above.
	20%	Shale - red-brown, firm, very silty, micaceous, very slightly to non-calcareous.
	Trace	Limestone - red-brown, green, micrycrystalline, hard, dense.
6010-6020	80%	Sandstone - conglomerate - as above.
	20%	Siltstone - as above.
	Trace	Shale - as above.
	Trace	Anhydrite - white, soft.
6020-6030	80%	Sandstone - conglomerate - as above.
	Trace	Siltstone - as above.
	20%	Shale - as above.
6030-6040	90%	Sandstone - becoming predominately medium to coarse grained, medium sorted, with occasional very coarse grained quartz grains.
6040-6050	80%	Sandstone - conglomerate as above.
	20%	Shale - brown, firm, silty, micromicaceous, very slightly to non calcareous.
6050-6060	90%	Sandstone - light red-orange, very fine to very coarse grained, subangular to subrounded, medium cementing in part, very arkosic, micaceous, very conglomeritic.
6060-6070	90%	Sandstone - conglomerate as above.

	10%	Shale - as above.
6070-6080	80%	Sandstone - conglomerate as above.
	20%	Shale - as above.
6080-6090	70%	Sandstone - conglomerate as above.
	30%	Shale - as above, some very silty grading to Siltstone.
6090-6100	100%	Sandstone - conglomerate as above.
		Common 1% Shale - as above.
6100-6110	70%	Sandstone - conglomerate as above.
	30%	Shale - as above.
6110-6120	70%	Sandstone - conglomerate - as above.
	30%	Shale - as above.
6120-6130	60%	Sandstone - conglomerate as above.
	40%	Shale - as above, some very silty grading to Siltstone
6130-6140	60%	Sandstone - conglomerate - as above.
	40%	Shale - as above. TRip Sample Abundant Cavings;
6140-6150	80%	Sandstone - conglomerate as above.
	20%	Shale - as above. Abundant Cavings.
6150-6160	80%	Sandstone - light red-orange, fine to very coarse grained, very poorly sorted, very poorly cemented to loose, micaceous, arkosic, conglomeritic.
6160-6170	60%	Sandstone - conglomerate as above.
	20%	Siltstone - as above.
	20%	Shale - as above.
6170-6180	10%	Sandstone - as above.
	50%	Siltstone - as above.
	40%	Shale - as above.

6180-6190	20%	Sandstone - as above, very arkosic as above.
	60%	Siltstone - as above.
	20%	Shale - as above.
6190-6200	80%	Sandstone - predominately medium to coarse grained, medium sorted, angular to subangular, very poorly cemented to loose, very arkosic.
	10%	Siltstone - as above.
	10%	Shale - as above.
6200-6210	80%	Sandstone - light red-orange, medium to coarse grained, medium sorted, occasionally very coarse grained, predominately subangular with some angular, some subrounded, loose arkosic.
6210-6220	90%	Sandstone - as above.
	10%	Siltstone - as above.
	Trace	Shale - brown, firm, silty, micaceous.
6220-6230	90%	Sandstone - as above.
	10%	Siltstone - as above, some very micaceous.
	Trace	Shale - as above.
6230-6240	90%	Sandstone - as above.
	Trace	Siltstone - as above.
	10%	Shale - as above.
6240-6250	70%	Sandstone - as above.
	Trace	Siltstone - as above.
	30%	Shale - as above, some very silty.
6250-6260	80%	Sandstone - arkosic - as above.
	Trace	Siltstone - as above.
	20%	Shale - brown, red-brown, firm, silty, micaceous.
6260-6270	70%	Sandstone - as above.
	Trace	Siltstone - as above.

	30%	Shale - as above.
6270-6280	10%	Sandstone - as above.
	30%	Siltstone - red-brown, firm, micaceous, arkosic, very slightly to non-calcareous.
	60%	Shale - brown, red-brown, firm, very silty in part, very micaceous in part, very slightly to non-calcareous.
6280-6290	10%	Sandstone - as above.
	20%	Siltstone - as above.
	70%	Shale - as above.
6290-6300	10%	Sandstone - as above.
	20%	Siltstone - as above.
	70%	Shale - as above, some very silty, grading to Siltstone.
6300-6310	70%	Sandstone - medium to coarse grained, arkosic, as above.
	20%	Siltstone - as above.
	20%	Shale - as above.
6310-6320	90%	Sandstone - becoming red-orange, very fine to medium grained, medium sorted, poorly cemented to loose, angular to subangular, arkosic.
	10%	Siltstone - red-orange, micaceous, arkosic.
	Trace	Shale
6320-6330	30%	Sandstone - as above.
	60%	Siltstone - as above.
	10%	Shale - brown, red-brown, firm, silty, micaceous.
6330-6340	80%	Sandstone - red-orange as above, becoming conglomeritic with increasing very coarse grains, subangular to subrounded Quartz grains.
	20%	Shale - as above.
6340-6350	90%	Sandstone - as above.

	10%	Shale - as above, very micaceous.
6350-6360	90%	Sandstone - red-orange, medium to coarse grained with some very coarse grained conglomeritic; predominately angular to sub-angular with some rounded Quartz grains, loose, arkosic.
	10%	Siltstone - red-orange, firm, very micaceous, very arkosic.
6360-6370	Trace	Sandstone - as above.
	10%	Siltstone - as above.
	30%	Shale - brown, brick red, red-brown, firm, silty in part, micaceous in part, slightly calcareous.
	60%	Limestone - light gray-brown, light cream, some white, chalky predominately microcrystalline with some very fine crystalline. Trace fossil fragments, some dolomitic, some silty. NSOFC.
6370-6380	70%	Limestone - as above, some dolomitic.
	20%	Siltstone - as above.
	10%	Sandstone - as above predominately medium to coarse loose.
6380-6390	90%	Sandstone - light orange-red, medium to very coarse grained, angular to subangular, very arkosic, with abundant clear to salmon pink K-Spar grains, some granite rock fragments some very micaceous, cherty.
	10%	Siltstone - as above.
		Common - 1% Limestone - as above.
6390-6400	40%	Sandstone - red-orange, fine to medium grained with some coarse grained angular to subangular very arkosic, loose, cherty.
	40%	Siltstone - as above, some very micaceous, very arkosic.
	20%	Shale - brown, red, firm, silty, micaceous, slightly calcareous.
6400-6410	60%	Siltstone - red-brown, as above.

	40%	Shale - red-brown, as above.
	Trace	Limestone - as above.
	Trace	Sandstone - light gray to white, very fine grained, friable, calcareous.
6410-6420	20%	Siltstone - red-brown, f firm, slightly calcareous, very arkosic, very micaceous, very sandy, grading to very fine grained Sandstone.
	20%	Limestone -white, pink, soft, chalky, some gray, dense.
	Trace	Common Sandstone -light gray-green, white, very fine grained, subangular to subrounded, friable, calcareous.
	50%	Sandstone - very light red-orange, fine to coarse grained with some very coarse grained angular, firm, to friable, very slightly calcareous, very arkosic, very micaceous, cherty in part.
	10%	Shale - brown - red, firm, silty, slightly calcareous, very micaceous.
6420-6430	80%	Shale - brown - red, firm, silty, calcareous, very micaceous in part.
	20%	Siltstone - brown-red, firm, calcareous, arkosic, micaceous.
	Trace	Limestone - white, pink, soft, chalky.
6430-6440	90%	Sandstone - red-orange, medium to coarse grained, angular loose, very arkosic, abundant chert, white, cream, sharp.
	10%	Shale - as above.
6440-6450	90%	Sandstone - as above.
	10%	Shale - as above.
	Trace	Limestone - gray, red-gray, dense, silty.
6450-6460	90%	Sandstone - light red-orange, medium to coarse grained, angular, cherty, very arkosic, loose, abundant loose Mica flakes.
	10%	Shale - brown - red, firm, silty, micaceous, slightly calcareous, some very silty grading to

		siltstone.
	Trace	Limestone - white, pink, soft, chalky.
6460-6470	90%	Sandstone - as above.
	10%	Shale - as above.
	Trace	Limestone - as above, some pink, silty, dense.
6470-6480	80%	Sandstone - as above.
	20%	Shale - as above.
	Trace	Limestone - as above.
6480-6490	60%	Sandstone - as above.
	40%	Shale - as above.
	Trace	Common Limestone - light red-brown, pink, microcrystalline, hard, dense, silty, dolomitic.
6490-6500	90%	Sandstone - light red-brown, arkosic - as above.
	10%	Shale - as above.
		Common 1% - Limestone - as above, pink, white, soft, chalky.
6500-6510	90%	Sandstone - very light red-orange, clear, medium to coarse grained, angular, loose, arkosic.
	10%	Shale - brown-red, firm, silty, some very micaceous.
6510-6520	80%	Sandstone - as above.
	20%	Shale - as above, with some light lavender bentonitic.
	Trace	Limestone - as above.
6520-6530	90%	Sandstone - very light red-orange, clear - as above.
	10%	Shale - as above.
	Trace	Limestone - as above.
6530-6540	90%	Sandstone - as above, very arkosic, abundant

		loose mica flakes.
	10%	Shale - as above.
6540-6550	90%	Sandstone - as above.
	10%	Shale - as above, trace green, splintery.
	Trace	Limestone - as above.
6550-6560	20%	Sandstone - as above.
	80%	Shale - predominately brown, red, firm, silty, micaceous, with some lavender bentonitic, some red-orange, soft, chalky.
6560-6570	60%	Sandstone - medium to coarse grained, angular, loose, arkosic.
	40%	Shale - as above, with trace green silty, non-calcareous.
6570-6580	30%	Sandstone - as above.
	60%	Shale - as above, with some lavender, firm, silty, micaceous.
	10%	Limestone - red to brown, red to gray, microcrystalline, hard, dense.
6580-6590	80%	Sandstone - as above, some very coarse grained.
	10%	Shale - as above.
	10%	Limestone - as above, very hard, dense.
6590-6600	95%	Sandstone - very light red to orange, white, medium to very coarse grained angular loose, arkosic.
NSOFC	05%	Shale - as above.
	Trace	Limestone - as above.
6600-6610	90%	Sandstone - as above, arkosic.
	10%	Shale - as above.
6610-6620	70%	Sandstone - as above.
	30%	Shale - red to brown, firm, silty, micaceous, some grading to Siltstone.

	Trace	Limestone - white, pink, soft, chalky.
6620-6630	70%	Sandstone - as above. Trace orange chert.
	30%	Shale - as above.
	Trace	Limestone - as above.
6630-6640	40%	Sandstone - as above.
	60%	Shale - as above, very silty, very micaceous, trace lavender, micaceous.
	Trace	Lavender, micaceous.
	Trace	Limestone - as above.
6640-6650	20%	Sandstone - as above.
	60%	Siltstone - red orange, firm, friable, calcareous, arkosic, micromaceous.
	20%	Shale - red to brown, brick red, firm, silty, micaceous, slightly calcareous.
6650-6660	60%	Sandstone - as above.
	20%	Siltstone - as above.
	20%	Shale - as above, abundant loose biotite flakes.
6660-6670	80%	Sandstone - light orange, medium to very coarse grained angular poorly sorted loose.
	10%	Siltstone - as above.
	10%	Shale - as above.
6670-6680	90%	Sandstone - as above.
	10%	Shale - as above. Trace Siltstone - as above Trace Limestone - as above.
6690-6700	90%	Sandstone - as above.
	10%	Shale - as above with increasing very micaceous. Trace Siltstone - as above. Trace Limestone - as above. Trace orange Chert.
6700-6710	95%	Sandstone - very pale orange - clear, medium to coarse grained with abundant very coarse grained angular to sharp, loose, arkosic.

	05%	Shale - brick red, firm, micaceous.
	Trace	Limestone - gray to green, microcrystalline, hard, dense, some white soft, chalky.
6710-6720	70%	Limestone - gray to green, gray to brown, white, silty, micaceous, dolomitic, pre-dominately microcrystalline, hard, dense, with some white soft, chalky.
	10%	Sandstone - as above.
	10%	Shale - as above becoming very micaceous.
6720-6730	30%	Limestone - as above.
	60%	Sandstone - white with clear grains, medium to coarse grained with some fragments, very coarse grained very poorly sorted, medium cemented calcareous, very micaceous, predominately angular with some subangular; trace arkosic as above.
	10%	Shale - as above some becoming lavender to red, firm, silty, micaceous.
6730-6740	90%	Sandstone - white, medium to coarse grained, with some fine grained, poorly sorted, firm, calcareous, with abundant brown mica inclusions.
	10%	Limestone - as above with some white, chalky.
	Trace	Shale - brown, silty.
6740-6750	30%	Sandstone - as above.
	70%	Limestone - medium to dark gray to brown, very fine crystalline, very silty, very micaceous, dolomitic, grading to dolomitic siltstone, abundant orange chert inclusions; some light cream to white very fine crystalline, dense, micaceous.
	Trace	Shale - as above.
6750-6760	100%	Limestone - medium gray, microcrystalline, dense, silty, micaceous with some light gray, cream, sparry, abundant, fossil fragments (fusilinids).
NSOFC	Trace	Shale - gray to brown, firm, silty, micaceous.

6760-6770	100%	Limestone - medium gray, microcrystalline, as above, abundant fossil fragments, some silty, dolomite.
6770-6780	100%	Limestone - as above with trace Brachiopoda fossil fragments. Trace fossil fragments.
6780-6790	90%	Limestone - as above with Fusilinids - as above.
	10%	Sandstone - light gray to white, very fine grained subangular, friable to medium cemented dolomitic, very micaceous, with abundant clay matrix.
6790-6800	20%	Limestone - as above.
	80%	Sandstone - as above.
	Trace	Shale - brick red, silty, micaceous, some grading to Siltstone.
6800-6810	20%	Limestone - medium gray, microcrystalline, hard, dense, some white, soft, chalky. Trace fossil fragments.
	60%	Sandstone - white, light gray, very fine grained - as above, with abundant medium to coarse grained arkosic.
	20%	Shale - red-brown, brick red, firm, micaceous, some very silty grading to siltstone.
6810-6820	10%	Limestone - as above with some lavender to gray, light red-gray microcrystalline, hard, dense.
	20%	Sandstone - as above.
	50%	Siltstone - very light red to orange to pale pink, firm, calcareous, silty, micaceous, some very sandy grading to very fine sandstone.
	20%	Shale - brown to red, micaceous, as above.
6820-6830	60%	Limestone - light to medium gray, cream to light tan predominately microcrystalline with some very fine crystalline, hard, dense, silty in part, micaceous in part, dolomitic, trace fossil fragments.

	20%	Sandstone - predominately red to orange, medium to coarse grained arkosic.
	20%	Shale - as above. Trace Siltstone - as above.
6830-6840	90%	Limestone - as above.
	05%	Sandstone - as above.
	05%	Shale - as above.
6840-6850	80%	Limestone - as above with increasing cream, white, fine to medium crystalline recrystallized spar some light red to gray, microcrystalline, silty, dolomitic, hard, dense.
	15%	Shale - brick red, brown, red, as above.
	05%	Sandstone - as above.
6850-6860	80%	Limestone - predominately cream to very light gray, fine to medium crystalline, recrystallized spar.
	20%	Shale - brown to red, brick red, firm, silty, micaceous.
		Common 1% Sandstone - light orange arkosic
6860-6870	100%	Limestone - light to medium gray, microcrystalline, hard, dense, very sandy, very silty, very micaceous, dolomitic.
	Trace	Shale - as above.
6870-6880	100%	Limestone - as above.
	Trace	Shale - as above.
6890-6900	100%	Limestone - as above, becoming predominately medium gray. Trace Shale
6900-6910	90%	Limestone - as above.
	10%	Shale - brick red, firm micaceous.
6910-6920	95%	Limestone - as above, some very micaceous.
	05%	Shale - as above.
6920-6930	90%	Limestone - as above.
	05%	Shale - as above.

	05%	Sandstone - clear, light orange, medium to coarse grained, subangular, loose.
6930-6940	90%	Sandstone - as above with abundant clear, milky, chert grains.
	Trace	Shale - brick red, firm, silty, micaceous.
	10%	Limestone - as above.
6940-6950	90%	Sandstone - clear, light orange stained, medium to coarse angular to subangular, loose very arkosic, micaceous.
	10%	Limestone - as above.
	Trace	Shale - as above.
6950-6960	100%	Sandstone - as above - very arkosic, very immature.
	Trace	Shale - as above.
	Trace	Limestone - as above.
6960-6970	100%	Sandstone - very light tan, very fine grained, well sorted, with occasional medium to coarse grained inclusions, subangular, poor cementing, slightly calcareous, some medium to coarse grained arkosic, as above.
	Trace	Limestone - cream, soft, silty, chalky.
6970-6980	80%	Sandstone - predominately, medium to coarse grained, loose, arkosic with abundant light tan, very fine grained as above. Conglomeritic.
	10%	Shale - brick red, firm, silty, micaceous.
	10%	Limestone - medium gray, microcrystalline, hard, dense.
6980-6990	90%	Sandstone - medium to coarse grained, arkosic, as above, very micaceous.
	Trace	Limestone - as above.
6990-7000	100%	Sandstone - as above, becoming predominately clear, medium to coarse grains, conglomeritic, abundant Mica.
7000-7010	100%	Sandstone - clear, with light gray to brown

		stain, medium to very coarse grained, poorly sorted, conglomeritic, abundant feldspar grains, very abundant, brown, mica.
	Trace	Common Shale - red - brown, red-gray, firm, very micaceous.
7010-7020	100%	Sandstone - as above with some light brown, fine grained, medium sorted, subangular.
	Trace	Shale - as above.
7020-7030	90%	Sandstone - light to medium gray, very fine to fine grained subangular, very well cemented, dolomitic micaceous, silty, grading to Dolomite, light to medium gray, micro-crystalline, hard, dense, very sandy, Mica.
	10%	Dolomite - light to medium gray, micro-crystalline, hard, dense, very sandy, micaceous, some very silty.
7030-7040	80%	Sandstone - as above.
	10%	Dolomite - as above.
	10%	Shale - red to brown, silty, micaceous.
7040-7050		Sample lost when roughneck washed off shaker.
7050-7060		Abundant Cavings. Sandstone and Dolomite - as above.
7060-7070		Abundant Cavings - Sandstone and Dolomite as above.
7070-7080	70%	Dolomite - light to medium gray, very fine crystalline, very silty, very micaceous, some calcareous.
	20%	Sandstone - light to medium grained very fine grained silty, very well cemented dolomite, very micaceous.
	10%	Shale - red-brown, firm, silty, micaceous, Abundant cavings.
7080-7090	60%	Dolomite - as above.
	10%	Sandstone - as above.
	10%	Limestone - white, cream, very fine crystalline - soft chalky, silty, trace orange Chert.

	10%	Shale - red-brown, silty, micaceous - as above.
7090-7100	80%	Sandstone - light cream to white, very fine to fine grained, medium sorted, subangular, well cemented, dolomitic very micaceous, arkosic, with trace orange Chert inclusion.
	10%	Dolomite - light to medium gray, very silty, as above.
	10%	Limestone - light to medium gray with some cream, very fine crystalline.
	Trace	Common Shale - as above.
7100-7110	60%	Sandstone - light cream to light gray to medium gray, very fine to fine grained, medium sorted, subangular, well cemented dolomite, very micaceous, arkosic in part with trace orange chert inclusions, trace green Chlorite inclusions.
	20%	Dolomite - light to medium gray, micro-crystalline, hard, dense, very silty, sandy, very micaceous.
	10%	Limestone - cream to light gray, micro-crystalline, hard, dense, dolomitic, silty, micaceous, some very shaley.
	10%	Shale - brick red, red to brown, firm, silty, micaceous, arenaceous in part, slightly calcareous to dolomitic.
7110-7120	40%	Sandstone - as above.
	60%	Dolomite - as above.
	10%	Limestone - as above.
	10%	Shale - as above.
7120-7130	80%	Limestone - light cream to light gray, microcrystalline, hard, dense, dolomitic, some medium to dark gray hard, dense, trace ghost pelletal structure.
	10%	Dolomite - as above.
	10%	Shale - as above.
7130-7140	80%	Limestone - as above with increasing cream, microcrystalline to very fine crystalline.

	10%	Shale - brick red, firm, silty, micaceous, calcareous.
	10%	Sandstone - white, clear, very fine to fine grained, subrounded, friable, calcareous.
7140-7150	60%	Sandstone - as above, becoming light cream to light tan, friable, calcareous, micaceous in part, slightly arkosic in part.
	30%	Limestone - as above.
	10%	Shale - as above.
7150-7160	40%	Limestone - medium gray with some light gray to cream, microcrystalline, hard, dense, dolomitic.
NSOFC	60%	Dolomite - light cream to light tan, predominately microcrystalline to very fine crystalline, hard, dense, with some medium to coarse crystals with trace intercrystalline porosity.
7160-7170	70%	Sandstone - light cream to light tan, very fine to fine grained subangular to subrounded, medium to well cemented, slightly calcareous, trace common Mica inclusions.
	20%	Dolomite - as above.
	10%	Limestone - as above with some white chalky.
7170-7180	90%	Sandstone - as above. Trace mineral fluorescence.
	05%	Limestone - as above.
	Trace	Dolomite - as above.
	Trace	Shale - red to brown, silty, micaceous.
7180-7190	100%	Sandstone - becoming predominately white to very light gray very fine grained subangular, well cemented, very slightly calcareous to dolomitic.
	Trace	Common Dolomite - as above.
	Trace	Common Limestone - as above.
7190-7200	10%	Sandstone - as above.
	90%	Dolomite - medium to dark gray, micro-

crystalline, hard, dense, salty, micaceous in part, shaley.

7200-7210 100% Dolomite - as above, medium to dark gray.

7210-7213 100% Dolomite - as above, medium to dark gray.

Steel Line Measure 7213 = 7196. 17' Correction Uphole

7200-7210 100% Dolomite - as above, some grading to gray-brown, dolomitic Limestone.

Trace Shale - red to brown, silty micaceous.

7210-7220 100% Dolomite - as above. Trace Limestone - gray to brown, silty dolomite.

7220-7230 90% Dolomite - as above.

10% Limestone - gray to brown, microcrystalline, very silty, dolomitic, trace ghost pellioid structure.

7230-7240 90% Dolomite as above.

10% Limestone - as above. Trace Shale - red to brown silty.

7240-7250 80% Dolomite - as above.

20% Limestone - as above. Trace Shale - red to brown silty.

7250-7260 60% Dolomite - as above.

40% Limestone - gray to brown, microcrystalline, very silty dolomitic.

7260-7270 40% Dolomite - as above.

50% Limestone - light tan to light brown, cream, microcrystalline, hard, dense, dolomitic some cream very fine crystalline chalky, some gray to brown, microcrystalline as above.

10% Shale - red to brown, silty, micaceous, calcareous.

7270-7280 70% Limestone -as above.

20% Dolomite - as above.

10% Shale -as above with trace Sandstone very light

		brown, very fine grained very silty, grading to Siltstone.
7280-7290	80%	Sandstone - very light red to brown, to very light tan, very fine grained subangular, medium cemented to friable, calcareous to dolomitic, with clay matrix some red to orange arkosic micaceous, some very silty grading to Siltstone; some white, light gray very fine grained.
	10%	Limestone - as above.
	10%	Shale - red to brown, firm silty, micaceous.
7290-7300	100%	Sandstone - as above with increasing white to light gray, very fine grained, friable.
	Trace	Shale - as above.
7300-7310	80%	Sandstone - light tan, very fine grained silty, micaceous, firm some grading to Siltstone.
	20%	Shale - brown, firm very silty, very micaceous with abundant biotite flakes.
	Trace	Sandstone - white, gray to green micaceous.
7310-7320	80%	Shale - as above, very micaceous.
	20%	Sandstone - as above with some medium to coarse grained very poorly sorted, angular arkosic.
	Trace	Limestone - gray to green, microcrystalline, dense.
7330-7340	100%	Sandstone - as above.
	Trace	Shale - as above.
	Trace	Limestone - white, light pink, soft chalky.
7340-7350	90%	Sandstone - very light red to orange bleached, fine to very coarse grained conglomeritic, angular, well cemented calcareous with clay matrix to loose abundant clear, orange Chert, hard, sharp, micaceous in part, arkosic in part.
	10%	Sandstone - light brown to light tan, very fine grained silty as above.
7350-7360	100%	Sandstone - light orange, bleached, very fine to very coarse grained conglomerate, arkosic as

above.

7360-7370	100%	Sandstone - as above with 40% very fine to medium grained very micaceous.
7370-7380	100%	Sandstone - arkosic, conglomerate as above.
7380-7390	100%	Sandstone - bleached, arkosic, conglomeritic as above.
7390-7400	100%	Sandstone - as above, trace Shale - red to brown, silty, micaceous.
7400-7410	100%	Sandstone - as above.
7410-7420	100%	Sandstone - becoming predominately white, light gray to white, very fine to fine grained subangular, well cemented, slightly calcareous, very micaceous, with trace orange Chert inclusion.
7420-7430	80%	Limestone - medium to dark gray, very fine crystalline, hard, dense, very silty, micaceous, very dolomitic with abundant secondary spar inclusions, medium to coarse crystalline, light tan to cream, abundant micro fossils.
	10%	Shale - red to brown, brick red, firm, silty, micaceous.
	10%	Sandstone - as above, predominately loose quartz grains.
7430-7440	90%	Sandstone - light orange - white, bleached, medium to very coarse grained, very poorly sorted, conglomeritic, abundant white, orange, Chert fragments, arkosic, micaceous, predominately loose with some fragments, very well cemented, calcareous with clay matrix.
	10%	Limestone - as above.
7440-7450	60%	Sandstone - conglomerate as above.
	30%	Limestone - medium gray, very fine crystalline, dolomite micaceous.
	10%	Shale - red to brown, silty, as above.
7450-7460	80%	Sandstone - light brown to tan, very fine to fine grained, medium sorted, subangular to subrounded, poor to medium cemented, calcareous some with very calcareous matrix, micaceous.

	20%	Limestone - light tan to cream, soft chalky, mary.
7460-7470	90%	Shale - medium brown to gray with indurated calcareous, very micaceous, very silty.
	10%	Limestone - red to brown, gray to brown, microcrystalline, hard, dense, silty.
	Trace	Sandstone - as above.
7470-7480	60%	Shale - as above with some red to brown silty micaceous.
	20%	Shale - brown to gray firm micaceous, silty.
	20%	Limestone - predominately medium gray to very fine crystalline, hard, dense, silty, dolomitic, with trace fossil fragments, some cream soft, chalky.
7490-7500	20%	Sandstone - as above.
	20%	Shale - as above.
	60%	Limestone - as above predominately cream to tan chalky, with abundant medium gray to very fine crystalline hard, dense, trace fossil fragments.
	Trace	Anhydrite - white soft.
7500-7510	90%	Sandstone - very light tan to white, fine to medium grained with some very fine grained medium sorted, medium to well cemented calcareous, subangular to subrounded. Trace common inclusion. Trace orange Chert inclusion, trace Arkose as above.
	10%	Shale - brown, red to brown, firm, silty, micaceous.
	Trace	Limestone - very fine crystalline, hard, dense.
7510-7520	90%	Dolomite - medium to dark gray, very fine crystalline silty, micromicaceous, micritic, trace micro fossils, very dense.
NSOFC		
	10%	Limestone - light gray to brown, very fine crystalline, silty, micaceous, very dolomitic.
	Trace	Shale - as above.

7520-7530	90%	Dolomite - as above, some very shaley.
	10%	Limestone - as above.
	Trace	Shale - as above.
7530-7540	100%	Dolomite - as above.
	Trace	Limestone - as above.
7540-7550	100%	Dolomite - as above.
	Trace	Limestone - as above.
7550-7560	90%	Dolomite - medium to dark gray microcrystalline to very fine crystalline, hard, dense, silty, some becoming light gray, limey.
	10%	Limestone - light gray, light gray, brown, very fine crystalline, hard, dense, silty, some light cream, soft, chalky.
	Trace	Shale - red to brown silty.
7560-7570	90%	Dolomite - as above.
	10%	Limestone - as above.
	Trace	Shale - as above.
7570-7580	80%	Dolomite - as above.
	10%	Limestone - as above. Trace Pyrite
	10%	Shale - as above.
7580-7590	60%	Dolomite - as above.
	30%	Limestone - light gray to brown, very fine microcrystalline, hard, dense, some with abundant broken fossil fragments, silty in part, dolomitic in part, trace Pyrite.
	10%	Shale - as above.
7590-7600	80%	Sandstone - white, very fine grained with some fine grained medium sorted subangular, well cemented calcareous, trace orange Chert inclusion, trace brown biotite inclusion.
	10%	Dolomite - as above.
	10%	Shale - red to brown, silty, micaceous.

	Trace	Common Chert orange, coarse to very coarse grained, hard, sharp.
	Trace	Arkose - red, medium to very coarse, conglomeritic.
7610-7620	50%	Limestone - cream to light tan, micro-crystalline, hard, dense, siliceous in part.
	30%	Dolomite - as above.
	20%	Shale - as above.
	Trace	Sandstone - as above.
7620-7630	30%	Sandstone - white, light cream, very fine to fine grained medium cemented calcareous. Trace orange Chert inclusion, Trace brown mica inclusion.
	20%	Limestone - as above with some becoming soft, chalky.
	10%	Dolomite - light to medium gray, v very fine crystalline, hard, dense, silty, sandy, micaceous.
	30%	Shale - red to brown, firm, silty, micaceous, some grading to siltstone.
	10%	Arkose - deep red to brown, fine to coarse grained, poorly sorted, poor to well cemented, calcareous with abundant mica inclusion.
7630-7640	40%	Sandstone - as above.
	30%	Dolomite - as above some grading to dolomitic shale.
	20%	Limestone - as above, predominately white to light cream.
	10%	Arkose - as above.
	Trace	Common Shale - red to brown, silty.
7640-7650	50%	Limestone - very light gray to brown, light gray, light tan, microcrystalline, very fine crystalline, hard, dense, silty in part, dolomitic in part.
	20%	Dolomite - medium to dark gray, very fine crystalline, hard dense, silty, with biotite inclusions some grading to gray-brown dolomite, shale.

	10%	Arkose, brick red, medium to coarse grained, angular to subangular medium cemented to loose with mica inclusion.
	Trace	Sandstone -white very fine to fine grained as above.
7650-7660	90%	Limestone - as above some becoming cream, soft, chalky.
	10%	Shale - red to brown, silty, as above.
	Trace	Arkose
7660-7670	80%	Limestone - as above.
	10%	Dolomite - medium to dark gray as above, some very shaley.
	10%	Shale - as above. Trace lavender to brown silty, micaceous. Trace Common Arkose - as above.
7670-7680	70%	Sandstone - 40% white, light cream, very fine to fine grained subangular, medium to well cemented, calcareous with abundant loose grains.
	30%	Arkose - brick red, very fine to very coarse grained, angular to sub angular; well cemented calcareous to loose quartz grains, micaceous.
	20%	Limestone - as above.
	10%	Shale - brick red silty, micaceous, as above.
7680-7690	70%	Limestone - predominately light to medium gray, very fine crystalline, hard, dense, silty, with abundant light tan to cream, chalky some very dolomitic grading to limey Dolomite, some very micaceous grading to limey Shale.
	10%	Sandstone - white to cream, very fine to fine grained - as above.
	10%	Arkose
7690-7700	50%	Dolomite - medium to dark gray, very fine crystalline, hard, dense, silty, shaley.
	20%	Limestone - as above.
	20%	Sandstone - arkosic - as above.

	10%	Shale - as above.
7700-7710	90%	Dolomite - medium to dark gray, very fine crystalline, silty, shaley, hard, dense, some becoming gray to brown, limey.
	10%	Limestone - light gray to brown, light gray, very fine crystalline, very silty, very shaley.
	Trace	Common Arkose - as above, predominately loose.
7710-7720	90%	Dolomite - as above.
	10%	Limestone - as above.
	Trace	Common Shale - red to brown, firm, silty, micaceous.
	Trace	Arkose
7720-7730	90%	Dolomite - as above.
	10%	Limestone - as above. Trace altered fossil fragments.
	Trace	Common Shale - as above.
7730-7740	90%	Dolomite - as above.
	10%	Limestone - as above.
	Trace	Common Shale - as above.
	Trace	Arkose - as above.
7740-7750	80%	Sandstone - white, very light tan to cream, very fine to medium grained, poorly sorted with very coarse grained inclusion angular to subrounded well cemented calcareous with white clay matrix; trace altered biotite inclusions.
NSOFC		
	10%	Dolomite - as above with some altered to cream, sparry Limestone.
	10%	Shale - red to brown, firm silty, micaceous.
7750-7760	90%	Shale - white - as above.
	10%	Dolomite - as above.
	Trace	Shale - as above.

7760-7770	90%	Sandstone - as above with bleached golden to brown biotite inclusions.
	10%	Dolomite - light to medium gray, very fine crystalline, hard, dense, some micro-crystalline, sparry inclusions; silty in part.
	Trace	Shale -as above
7770-7780	40%	Dolomite - medium to dark gray, micro-crystalline, dense, very silty, very micaceous, some with cream, medium crystalline, sparry calcite inclusions some grading to Shale medium to dark gray very silty very micaceous.
NSOFC 400 PPM CO2		
	10%	Limestone - cream to light gray, micro-crystalline, dolomitic, some very siliceous, hard, dense.
	10%	Shale - dark to medium ray, firm, silty, very micaceous, dolomitic.
	40%	Sandstone - as above some becoming dolomitic, some becoming siliceous.
	Trace	Shale - red to brown, silty as above.
	Trace	Common Arkose, brick red, loose very coarse grained to coarse grained.
7780-7790	60%	Dolomite - as above.
	10%	Limestone - as above.
	Trace	Shale - medium to dark gray - as above.
	Trace	Shale - red to brown, silty, as above.
	30%	Sandstone - becoming light to medium ray, dolomitic, siliceous, as above.
	Trace	Arkose - as above.
7790-7800	80%	Dolomite - as above some becoming very siliceous.
	10%	Shale - medium to dark gray, as above.
	10%	Sandstone - light to medium gray siliceous, dolomitic, as above.
	Trace	Limestone - as above.

	Trace	Arkosic - as above.
	Trace	Shale - brick red, as above.
7800-7810	60%	Dolomite - as above, some with sparry calcite inclusions.
	30%	Limestone - light to medium gray, silty, sandy, dolomitic.
	10%	Shale - medium to dark gray, silty, sandy, dolomitic.
	Trace	1% Sandstone - light to medium gray siliceous, dolomitic - as above.
	Trace	Shale - brick red, silty, sandy, micaceous.
	Trace	Arkose - brick red, loose.
7810-7820	70%	Dolomite - as above some very siliceous.
	20%	Limestone - as above, some very siliceous.
	10%	Sandstone - as above some very siliceous, quartzitic.
	Trace	1% Shale - medium to dark gray - as above.
	Trace	Shale - brick red, silty as above.
	Trace	Arkose - as above.
7820-7830	20%	Dolomite - as above.
	20%	Limestone - as above.
	60%	Sandstone - light gray, white, very fine to coarse grained poorly sorted, angular to subrounded, very well cemented predominately siliceous with trace calcite cement very hard, tight; some with biotite inclusions, some biotite altered to chlorite.
	Trace	Shale - very dark gray, silty, micaceous.
	Trace	Shale and Arkose - red, red to brown, as above.
7830-7840	40%	Dolomite - dirty gray to white, micro-crystalline, silty, sandy; some with micaceous inclusion some very siliceous grading to Sandstone some medium to dark gray - as above.

	30%	Limestone - white, cream, microcrystalline, silty, sandy.
	20%	Sandstone - light gray to white, very fine to medium grained poorly sorted subangular, very well cemented siliceous with some dolomitic.
	20%	Shale - medium to dark gray, firm, silty, sandy, dolomite, very micaceous.
	Trace	1% Shale and Arkose - red to brown micaceous.
7840-7850	60%	Dolomite - as above.
	30%	Limestone - as above.
	10%	Sandstone - as above.
	Trace	Shale - medium to dark gray - as above.
	Trace	Common Shale and Arkose, red to brown, micaceous, as above.
7850-7860	10%	Dolomite - as above.
	70%	Limestone - cream, very light tan, crypto-crystalline to microcrystalline, with some very fine crystalline, hard, dense, dolomitic, in part silty in part, trace fossil fragments.
	10%	Shale - predominately medium to dark gray, micaceous dolomitic with trace pale green subwaxy, pale gray to green silty.
	10%	Shale and Arkose - red to brown, micaceous.
7910-7920	10%	Limestone - as above.
	40%	Dolomite - as above.
	40%	Shale - medium to dark gray, as above.
	10%	Shale and Arkose red to brown as above (Cavings?)
7920-7930	90%	Limestone - light gray, cream, light tan, very fine crystalline, dense, very abundant fossil fragments (ostracodes) predominately biosparite with some biomicrite.

	10%	Shale - as above medium to dark gray.
	Trace	Dolomite - as above.
		Common Shale & Arkose, red to brown as above (cavings?)
7930-7940	90%	Sandstone - white, light tan, very fine to fine grained well sorted subrounded, medium to well cemented siliceous to very slightly calcareous, abundant white clay matrix.
	10%	Limestone - as above.
	Trace	Dolomite
	Trace	Shale - medium to dark gray, gray to brown.
		Common Shale & Arkose red to brown cavings
7940-7950	50%	Sandstone - as above some becoming very calcareous.
	40%	Limestone - as above some becoming medium gray, dolomitic.
	10%	Shale - as above.
		Abundant Shale & Arkose red to brown, brick red (cavings)
7950-7960	100%	Limestone - medium to ark gray, very fine crystalline, hard, dense, silty in part some with trace mica inclusion, dolomitic, some gray to brown, very silty, chalky predominately micritic with some sparry alteration. Trace pelloidal structure. Trace fossil fragments.
	Trace	Dolomite - as above.
		Abundant cavings as above Shale & Arkose, red to brown.'
7960-7970	100%	Limestone - as above some becoming very dolomitic, very argillaceous, abundant cavings - as above.
7970-7980	100%	Limestone - with increasing very dolomitic, very argillaceous.
7980-7990	100%	Limestone - medium to dark gray, with some gray to brown, microcrystalline, very fine crystalline, hard, dense, dolomitic, silty in part, some with smokey, cream, Chert inclusions

some siliceous, trace fossil fragments;
predominately micritic with abundant sparry
alteration.

Abundant cavings as above.

7990-7800	100%	Limestone - as above with increasing Chert. Abundant cavings - as above.
8000-8010	100%	Limestone - as above, very cherty, as above, abundant cavings.
8010-8020	80%	Sandstone - white, very fine to fine grained with some medium grained medium sorted, subangular to subrounded medium to well cemented calcareous with white sparry matrix. Trace Mica inclusion. Trace orange Chert inclusion.
	20%	Limestone - Cherty - as above. Abundant red to brown cavings - as above.
8020-8030	100%	Limestone - medium to dark gray very fine crystalline, hard, dense, very argillaceous, very dolomitic some light tan, sparry.
	Trace	1% Shale- medium to dark gray, gray to brown, argillaceous, dolomitic.
	Trace	Sandstone - white - as above. Abundant red to brown cavings.
8030-8040	50%	Sandstone - white, very fine to fine grained well sorted, subangular to subrounded medium to well cemented calcareous with white matrix.
	10%	Limestone - as above.
	Trace	Shale - medium to dark gray as above with trace Anhydrite fracture filling.
	40%	Arkose - red to orange medium to coarse grained loose.
	Trace	Common shale brick red, silty, micaceous.
	NOTE:	Arkose & Red Shale could be cavings.
8040-8050	70%	Limestone - as above.
	20%	Arkose - red to orange, medium to coarse grained loose.

	10%	Sandstone - white very fine to fine grained as above.
		Abundant cavings.
8050-8060	100%	Limestone - cream to light tan, very fine crystalline to microcrystalline, silty in part, chalky in part, some with clear, smokey Chert inclusions, trace Micaceous inclusions.
	Trace	Cavings.
8060-8070	100%	Limestone - as above. Trace cavings.
8070-8080	100%	Limestone - as above with trace common Chert as above.
8080-8090	100%	Limestone - becoming predominately light tan, microcrystalline, hard, dense, siliceous, with common Chert inclusion.
8083-8094		NOT CAUGHT DUE TO TRIP
8094-8100		Limestone - as above Very Poor Sample Predominately cavings.
8100-8110	100%	Limestone - medium to dark gray, microcrystalline to very fine crystalline, hard, dense, dolomitic in part, silty in part, some fragments shaley; trace common Chert, smokey, white, hard, sharp.
8110-8120	100%	Limestone - as above some gray to white Chalky.
8120-8130	100%	Limestone - as above, trace fossil fragments.
8130-8140	100%	Limestone - as above, trace fossil fragments.
8140-8150	100%	Limestone - as above, trace fossil fragments.
8150-8160	100%	Limestone - predominately medium to dark gray, very fine crystalline, hard, dense, silty dolomitic, some shaley abundant gray to white, light gray, soft, chalky, abundant Chert, gray, hard, sharp.
8160-8170	100%	Limestone -medium gray to medium gray-brown,with abundant gray to white, light gray very fine crystalline, hard, dense, silty, dolomitic; trace chert.
8170-8180	100%	Limestone - as above some sandy, trace fossil fragments.

8180-8190	100%	Limestone - predominately cream to very light tan, very fine crystalline, slightly sandy in part, some becoming soft, chalky.
8190-8200	100%	Limestone - very light tan to very light brown to gray, microcrystalline very fine crystalline, predominately hard, dense, with some medium hard some becoming soft, chalky; silty in part, dolomitic in part; abundant tan to light gray, chert inclusions; some fragments with brown stain, no fluorescence or cut. Trace fragments Limestone - medium to dark gray silty, shaley.
NOFC		
8200-8210	100%	Limestone - light gray to light gray brown, microcrystalline fine fine crystalline, hard, dense, silty, dolomitic. Trace fossil fragments
8210-8220	100%	Limestone - light to medium gray, with some dark gray microcrystalline, very fine crystalline, hard, dense, silty, dolomitic, common gray Chert. Trace fossil fragments. Trace red cavings.
8220-8230	100%	Limestone - as above becoming predominately medium to dark gray.
8230-8240	100%	Limestone - as above, common Cavings as above.
8240-8250	100%	Limestone - predominately medium to dark gray, microcrystalline to very fine crystalline, hard, dense, silty in part dolomitic, some siliceous, trace common smokey Chert, hard, sharp, common Red cavings -as above.
8250-8260	100%	Limestone - as above some becoming gray to brown.
8260-8270	100%	Limestone - as above.
8270-8280	100%	Limestone - as above. Very Poor Sample. Trip Sample. Abundant Cavings.
8280-8290	50%	Limestone - as above.
NSOFC	40%	Sandstone - light gray to light tan, very fine grained, well sorted, medium to well cemented, calcareous, very silty with clay matrix.
	Trace	Shale - dark gray to black, well indurated, slightly calcareous some with white to gray

		anhydrite inclusion, some becoming very limey.
8290-8300	80%	Anhydrite - light gray to white, silty, marley, with trace Pyrite inclusions.
	20%	Shale - dark gray, black - as above.
8300-8310	60%	Anhydrite - white, light gray, silty, shaley, soft, some marley.
	20%	Limestone - very dark gray to black, microcrystalline, hard, dense.
	10%	Shale - dark gray to black with some light to medium gray predominately well indurated with some soft, calcareous. common white anhydrite inclusion.
	10%	Sandstone - very light gray, very fine grained with some fine grained subrounded well cemented calcareous to dolomitic some very hard, dense.
8310-8320	30%	Limestone - very dark gray to black, microcrystalline, silty, shaley, with abundant Anhydrite inclusion, trace common Anhydrite fracture fill.
	30%	Sandstone - as above with trace biotite inclusion.
	10%	Shale - as above.
	30%	Anhydrite - as above.
8320-8330	20%	Limestone - as above some with Anhydrite inclusion.
	20%	Sandstone - as above.
	40%	Shale - as above some with Anhydrite inclusion.
	20%	Anhydrite - as above.
	Trace	Dolomite - light to medium gray, very fine crystalline, hard, dense, some with Anhydrite inclusion.
8330-8335	70%	Sandstone - light gray to light tan, very fine grained, well sorted, silty, calcareous, very dolomitic, friable to very well cemented, trace common Anhydrite matrix, good yellow fluorescence with good milky yellow cut, very good bright yellow residue ring some very

dolomitic grading to sandy Dolomite.

20% Limestone - as above.

10% Anhydrite - as above.

Circulated Samples at 8336 DST #1 8320-8336

8335-8340 Very Poor Sample - Logged after DST #1

70% Shale & Arkose - red orange, poor to well cemented some with white Anhydrite inclusion.

20% Sandstone - as above.

10% Limestone - as above some with Anhydrite inclusion.

8340-8350 70% Shale & Arkose - as above some Shale very silty, some with Anhydrite inclusion.

20% Limestone - medium to dark gray, microcrystalline, silty, with Anhydrite inclusion.

10% Anhydrite - clear, white, light gray.

8350-8360 60% Shale - red to orange, silty, micaceous, firm, calcareous, white Anhydrite inclusion, Anhydrite fracture fill, Arkose, red to orange, very fine to very coarse grained, very poorly sorted, micaceous, with trace common Anhydrite matrix.

30% Limestone - very light gray, microcrystalline, Anhydritic to medium dark gray, microcrystalline, silty, dolomitic, shaley, with common Anhydrite fracture fill, common Anhydrite inclusion.

10% Anhydrite - white, light gray, soft.

8360-8370 70% Shale & Arkose - red to orange as above.

20% Limestone - as above with Anhydrite inclusion as above.

10% Anhydrite - as above.

8370-8380 70% Shale & Arkose - red to orange as above some with shale becoming red to brown, firm, silty, calcareous, Common Anhydrite inclusion.

20% Limestone - light gray, marley, Anhydritic, medium to dark gray, microcrystalline, with

		Anhydrite fracture fill, Anhydrite inclusion; trace light pink very fine crystalline, hard, dense.
	10%	Anhydrite - gray, white, soft to firm.
8380-8390	80%	Shale & Arkose - as above becoming pale red to orange with abundant Anhydrite inclusion.
	10%	Limestone - as above with anhydrite fracture fill. Common 1% black carbonaceous material soft to firm, possible Gilsonite or dead asphaltic matter. No Fluorescence or cut.
8390-8400	80%	Limestone - light gray microcrystalline, silty with some medium gray to very fine crystalline to micrycrystalline, hard, dense, some shaley.
	10%	Shale - dark gray, black, firm, fissile, calcareous.
	10%	Shale - pale red to orange as above.
8400-8410	90%	Limestone - medium gray, silty, microcrystalline some with Anhydrite inclusion.
	10%	Shale - dark gray to black, firm, silty, slightly calcareous, trace Anhydrite fracture fill.
8410-8420	100%	Limestone - as above, some with light gray soft, marley, common 1% Shale -as above.
	Trace	Anhydrite - white, light gray, soft, marley.
8420-8430	90%	Limestone - as above with common Anhydrite inclusions.
	Trace	Shale - as above, common Anhydrite, white, soft.
8440-8450	30%	Limestone - medium to dark gray, micro-crystalline, hard, dense, silty, with some light gray, marley, Anhydritic.
	50%	Sandstone -light tan to cream, very fine grained, subrounded to subangular, very well cemented, dolomitic.
	10%	Shale - dark gray to black silty, with indurated calcareous.
	10%	Anhydrite - white, light gray, soft, silty in

part.

8450-8460	70%	Sandstone -as above some with biotite inclusions some grading to sandy Limestone; very well cemented.
NSOFC	30%	Limestone -medium to dark gray with some gray to brown microcrystalline, hard, dense, silty, some dolomitic.
	Trace	Shale -medium to dark gray -as above.
	Trace	1% Anhydrite - white, cream, as above.
8460-8470	60%	Sandstone - as above some grading to sandy Limestone.
	40%	Limestone - as above, some becoming very dolomitic.
	Trace	Shale - as above.
	Trace	1% Anhydrite -as above.
8470-8480	80%	Dolomite - light gray to brown, light gray, some medium gray microcrystalline, silty,sandy, some with Anhydrite inclusions.
	10%	Sandstone - light tan to cream as above.
	10%	Limestone - medium to dark gray with some light gray, soft, marley.
	Trace	Shale - dark gray to black as above.
	Trace	1% Anhydrite - white,cream, light gray as above.
8480-8490	40%	Dolomite as above.
	40%	Limestone - as above with silty gray, soft, marley.
	10%	Shale - dark gray to black with some light brown firm, silty, calcareous.
	10%	Arkose -brick red, very fine to coarse grained poorly sorted calcareous.
8490-8500	20%	Dolomite - as above some with Anhydrite inclusions.
	70%	Limestone -as above some with Anhydrite inclusions.

	10%	Arkose - as above.
	Trace	Shale - dark gray to black as above.
	Trace	1% Anhydrite white, soft, some white to clear, crystalline.
8500-8510	90%	Limestone -medium gray, microcrystalline, very silty, some dark gray microcrystalline, hard, dense, silty.
	10%	Arkose - as above.
	Trace	Shale - dark gray to black as above.
	Trace	1% Anhydrite as above.
8510-8520	100%	Limestone -as above.
	Trace	Shale - as above.
	Trace	Arkose - as above.
	Trace	Anhydrite -as above.
8520-8530	100%	Limestone - becoming predominately dark gray, very silty, Trace Shale - as above.
8530-8540	100%	Limestone - some becoming dolomitic, shaley, trace Shale - dark gray to black as above.
8540-8550	100%	Limestone - predominately light tan to light cream, very fine crystalline, with some cream chalky, sparry with trace fossil fragments abundant medium to dark gray microcrystalline, silty as above; some medium to dark gray with anhydrite inclusion, Anhydrite fracture fill.
8550-8560	100%	Limestone - becoming predominately medium gray, silty, and some light tan sparry as above.
	Trace	Shale - dark gray to black as above.
8560-8570	100%	Limestone - as above, some with trace Anhydrite fracture filling.
8570-8580	80%	Limestone - medium to dark gray microcrystalline, dense, silty, with some light to medium gray, marley, very silty, sandy, trace Anhydrite inclusions.
	20%	Sandstone - light cream to light tan, very fine grained, well sorted, friable to medium

		cemented, very calcareous with secondary calcite matrix, cement, some grading to a very sandy limestone.
8580-8590	100%	Sandstone - as above.
	Trace	Limestone - medium to dark gray as above.
8590-8600	100%	Sandstone - as above.
8600-8610	40%	Sandstone - white to light cream as above.
	60%	Anhydrite - white, clear, gray, dense, medium crystalline.
8610-8620	100%	Anhydrite as above with some gray to brown.
8620-8630	100%	Anhydrite - as above.
	Trace	1% Dolomite - tan to light brown, very fine crystalline, hard, dense, some with Anhydrite inclusions.
8630-8640	100%	Anhydrite - as above.
	Trace	Dolomite - as above.
8640-8650	30%	Anhydrite - as above.
	70%	Limestone - medium gray, brown, micro-crystalline to very fine crystalline, silty, shaley in part, some with Anhydrite fracture filling some with anhydrite inclusions some dolomitic; some becoming dark gray soft, marley, very shaley grading to limey shale.
8650-8670	20%	Anhydrite - as above.
	80%	Limestone - as above with increasing medium gray, brown, silty, marley; trace Pyrite inclusion abundant Anhydrite infilling some becoming very dolomitic.
8660-8670	80%	Anhydrite - as above.
	20%	Limestone - as above.
8670-8680	40%	Dolomite - medium to dark gray, brown, very fine crystalline, silty, dense, very scant trace dead brown oil stain, very scant trace very dull gold fluorescence, very poor slow light yellow milky cut.
	50%	Anhydrite - as above.

	10%	Limestone - as above becoming gray to brown marley.
8680-8690	60%	Anhydrite - as above.
	30%	Dolomite - as above.
	10%	Limestone - as above.
8690-8700	60%	Limestone - dark gray microcrystalline, hard, dense, silty, dolomitic in part with abundant anhydrite infilling.
	30%	Anhydrite - as above.
	10%	Dolomite - as above.

NOTE: Scant sample returns

8700-8710 Very Poor Sample abundant cavings due to Anhydrite and Salt contaminated drilling mud.

70% Limestone - as above. (cavings)

30% Anhydrite - as above (cavings)

8710-8720 Very Poor Sample. Predominate Cavings.

8720-8730 Probable Lithology Anhydrite
 8730-8740 and Halite interperated from
 8740-8750 drilling rate and drilling mud
 8750-8760 characteristics.
 8760-8763 Very scant sample returns.

Circulate at 8763 prepare to run logs and 9 5/8" casing.
 Saturated Salt Drilling Fluid

8763-8770	100%	Salt - white, clear, crystalline.
8770-8780	100%	Salt - as above.
8780-8790	100%	Salt -as above.
8790-8800	100%	Salt - as above.
8800-8810	100%	Salt - as above.
8810-8820	100%	Salt - as above.
8820-8830	100%	Salt - as above.
8830-8840	100%	Salt - as above.
8840-8850	100%	Salt - as above.

8850-8860	100%	Salt - as above.
8860-8870	100%	Salt - as above.
8870-8880	100%	Salt - as above.
		Common 1% Shale dark gray, firm calcareous, some very silty
8880-8890	90%	Salt - as above.
	10%	Shale - as above.
8890-8900	70%	Salt - as above.
	30%	Shale - as above.
8900-8910	70%	Salt - as above.
	20%	Siltstone - tan to light brown, friable calcareous, some with shaley inclusions some with anhydrite inclusions.
	10%	Shale - dark gray, firm silty, calcareous.
8910-8920	70%	Salt - as above.
	10%	Siltstone - as above some becoming light gray very well cemented, calcareous.
	20%	Shale - as above.
8920-8930	60%	Salt - as above.
	30%	Siltstone - as above.
	10%	Shale - as above.
8930-8940	80%	Salt - as above.
	10%	Siltstone - as above.
	10%	Shale - as above.
8940-8950	90%	Salt - as above.
	05%	Siltstone - as above.
	05%	Shale - as above.
8950-8960	90%	Salt - as above.
	10%	Siltstone - as above.

	Trace	Shale - as above.
8960-8970	100%	Salt - as above.
	Trace	Siltstone
	Trace	Shale - as above.
8970-8980	100%	Salt, trace Siltstone as above, trace Shale - as above.
8980-8990	100%	Salt - as above, trace Siltstone, trace Shale as above.
8990-9000	100%	Salt - as above, trace Siltstone, trace Shale - as above.
9000-9010	100%	Salt, clear, white, crystalline
9010-9020	100%	Salt - as above.
9020-9030	100%	Salt - as above.
9030-9040	100%	Salt - as above.'
9040-9050	100%	Salt - as above.
9050-9060	100%	Salt - with trace brown Siltstone, trace dark gray Shale occasional fragment of white Anhydrite.
9060-9070	100%	Salt - as above.
9070-9080	100%	Salt - as above.
9080-9090	100%	Salt - as above.
9090-9100	100%	Salt - as above.
9100-9110	100%	Salt - as above.
9110-9120	100%	Salt - as above.
9120-9130	100%	Salt - as above.
9130-9140	100%	Salt - as above.
9140-9150	100%	Salt - as above.
9150-9160	100%	Salt - with scant trace shale dark gray firm silty calcareous.
9160-9170	100%	Salt - as above.

9170-9180	100%	Salt - as above.
9180-9190	100%	Salt - as above.
9190-9200	100%	Salt - as above.
9200-9210	100%	Salt
9210-9220	100%	Salt
9220-9230	100%	Salt
9230-9240	100%	Salt
9240-9250	100%	Salt
9250-9260	100%	Salt
9260-9270	100%	Salt
9270-9280	100%	Salt
9280-9290	100%	Salt
9290-9300	100%	Salt
9300-9310	100%	Salt
	Trace	1% Siltstone - light tan to light brown, soft to firm, calcareous.
9310-9320	90%	Salt - clear, white crystalline.
NSOFC	10%	Shale - dark gray, gray to brown, firm silty, calcareous.
9320-9330	60%	Salt - as above.
	40%	Shale - as above.
9330-9340	40%	Salt - as above.
	60%	Shale - dark gray, gray to brown, firm, silty, calcareous.
	Trace	1% Siltstone - light brown, soft to firm calcareous.
9340-9350	100%	Salt
	Trace	1% Shale & Siltstone - as above.
9350-9360	100%	Salt - as above.

	Trace	1% Shale & Siltstone - as above abundant cement.
360-9370	80%	Salt - as above.
	20%	Anhydrite - white, soft.
370-9380	60%	Salt - as above.
	40%	Anhydrite - trace light gray, soft, silty Dolomite.
9380-9390	50%	Salt - as above.
	50%	Anhydrite - as above, trace light gray Dolomite - as above.
390-9400	100%	Salt - clear, white, crystalline.
9400-9410	100%	Salt
9410-9420	100%	Salt, trace brown Siltstone.
9420-9430	100%	Salt, trace brown Siltstone
9430-9440	100%	Salt, trace Anhydrite, white, soft.
9440-9450	100%	Salt, trace Anhydrite, white, soft.
9450-9460	100%	Salt
9460-9470	100%	Salt
9470-9480	100%	Salt
9480-9490	100%	Salt, trace Shale, dark gray to black, firm, silty calcareous.
9490-9500	100%	Salt trace Shale - as above.
Predominately Cavings 9500 to 9590		
9500-9510	10%	Salt as above. Trace Anhydrite, white, soft.
130FC	90%	Shale - dark gray to black firm, silty, calcareous to slightly calcareous, carbonaceous.
	Trace	1% Siltstone - light brown, tan, soft to firm, calcareous to slightly calcareous with black carbonaceous inclusions trace orange Chert inclusion.

9510-9520	10%	Salt - as above with trace Anhydrite - as above.
NSOFC	90%	Shale - as above.
	Trace	Siltstone - as above.
9520-9530	05%	Salt as above with trace Anhydrite as above.
NSOFC	90%	Shale - black carbonaceous as above.
	05%	Siltstone - as above with abundant orange Chert inclusions.
9530-9540	10%	Salt - as above with trace Anhydrite white, soft.
NSOFC	10%	Siltstone - light tan to brown, soft to firm, slightly calcareous, with orange Chert inclusions, black carbonaceous inclusions some becoming dolomitic.
9340-9350	20%	Salt as above. Trace Anhydrite as above.
	70%	Shale - as above.
	10%	Siltstone - as above.
9550-9560	30%	Salt - clear, white, crystalline.
	60%	Shale - black, carbonaceous, silty, slightly calcareous.
	Trace	Anhydrite - white, soft.
	Trace	Shale - pastel green, bentonitic.
	Trace	Chert - orange, hard, sharp.
9560-9570	60%	Salt - as above some with orange translucent, some with Anhydrite interlamination.
	40%	Shale - as above.
	Trace	Siltstone - as above.
	Trace	Dolomite - light gray to brown, microcrystalline Anhydritic.
9570-9580	80%	Salt - as above with some orange to brown translucent.
	20%	Shale - as above. Trace green pastel.

	Trace	Siltstone - as above.
	Trace	1% Anhydrite white, soft.
9580-9590	70%	Salt - as above with trace 1% orange to brown, translucent.
	20%	Shale - as above.
	10%	Siltstone - as above.
		Common Anhydrite, white, soft, light brown, translucent.
9590-9600	40%	Anhydrite, white, soft, light brown, translucent some with dolomitic inclusions.
NSOFC	30%	Salt - as above.
	20%	Shale - black carbonaceous as above.
	10%	Siltstone - light brown to light tan soft to firm some dolomitic grading to silty Dolomite abundant Anhydrite inclusions.
9600-9610	70%	Anhydrite - white, light brown translucent some with Dolomite inclusions.
	20%	Salt
	10%	Shale - black carbonaceous.
9610-9620	90%	Anhydrite - as above.
	10%	Shale - as above.
		Trace Common Salt.
9620-9630	50%	Salt - as above.
	40%	Anhydrite - as above.
	10%	Shale - as above.
9630-9640	90%	Salt predominately clear with some light orange translucent.
	10%	Shale - black carbonaceous.
	Trace	Anhydrite - as above.
	Trace	Siltstone - light brown, soft, calcareous.
9640-9650	80%	Salt - as above.

	20%	Anhydrite - predominately light brown to brown cryptocrystalline, some white, soft.
	Trace	Shale - black carbonaceous as above.
9650-9660	90%	Salt - as above.
	10%	Anhydrite - as above.
9660-9670	80%	Salt - as above.
	20%	Anhydrite - as above.
9670-9680	95%	Salt - as above.
	05%	Anhydrite - as above.
	Trace	Shale - black carbonaceous. as above.
9680-9690	60%	Salt - as above.
	30%	Anhydrite - light brown, brown crystalline; white, soft.
	10%	Shale - black, firm, silty, carbonaceous, slightly calcareous.
9690-9700	90%	Salt
	10%	Anhydrite
	Trace	1% Shale - red to brown, firm, silty, calcareous.
9700-9710	80%	Salt - clear, white, crystalline.
	10%	Anhydrite - light brown, brown, white.
	10%	Shale - predominately black silty, carbonaceous with trace red to brown, firm silty.
9710-9720	60%	Shale - predominately black, silty, carbonaceous, some grading to gray to brown, soft; trace red to brown, firm silty.
	40%	Anhydrite - light brown, white, soft, silty, gummy.
9720-9730	40%	Shale - as above.
	60%	Anhydrite - as above.
9730-9740	100%	Salt - Trace Shale, Trace Anhydrite.

9750-9760	100%	Salt - some with light orange, light brown, shading. Trace shale black carbonaceous.
9760-9770	90%	Salt - predominately clear, transparent, with abundant light orange, light brown.
	10%	Anhydrite - white, soft.
	Trace	Shale - predominately dark gray to black, soft, silty, anhydritic with some red to brown silty, firm.
9770-9780	90%	Salt - as above.
	10%	Anhydrite - as above.
	Trace	Shale - as above.
9780-9790	95%	Salt - clear, white, crystalline.
	05%	Anhydrite - white, light tan.
	Trace	Shale - black carbonaceous, silty.
9790-9800	100%	Salt - as above.
	Trace	Shale - as above.
9800-9810	100%	Salt -white, clear, crystalline.
	Trace	Anhydrite - white, soft, brown to light brown, crystalline.
	Trace	Siltstone - light brown, soft, dolomitic.
9810-9820	100%	Salt - as above.
	Trace	Anhydrite - as above.
	Trace	Siltstone - as above.
9820-9830	100%	Salt - as above.
	Trace	Anhydrite - as above.
	Trace	Siltstone - as above.
	Trace	Shale - black, silty, carbonaceous.
9830-9840	100%	Salt - as above.
	Trace	Shale - as above.
9840-9850	100%	Salt - as above.

	Trace	Shale - as above.
9850-9860	100%	Salt - as above.
	Trace	Siltstone - as above.
	Trace	Shale - as above.
9860-9870	100%	Salt - as above.
	Trace	Siltstone - as above.
	Trace	Shale - as above.
9870-9880	100%	Salt - as above.
	Trace	Shale - as above.
9880-9890	70%	Salt - as above.
	10%	Anhydrite - light brown, soft to firm, with Dolomite streaks.
	20%	Shale - dark gray to black firm, silty, carbonaceous.
9890-9900	60%	Anhydrite - white, soft, light brown, soft to firm, with Dolomite inclusions.
	40%	Shale - dark gray to black, soft to firm, silty, anhydritic in part.
9900-9910	60%	Shale - black, soft to silty.
NSOFC	40%	Anhydrite predominately light brown, soft with Dolomite inclusions some white, soft gummy.
	Trace	Siltstone - brown, soft, dolomitic.
9910-9920	60%	Anhydrite - as above.
	40%	Shale - as above.
9920-9930	20%	Salt - clear, white, crystalline.
	40%	Anhydrite - as above.
	40%	Shale - as above.
9930-9940	70%	Salt - as above.
	20%	Anhydrite - as above.

	10%	Shale - as above.
9940-9950	95%	Salt - as above with trace orange, red.
	05%	Shale - as above.
9950-9960	100%	Salt - as above. Trace orange to red. Trace Anhydrite. Trace Shale.
9960-9970	100%	Salt - predominately clear, white, with trace orange to red. Trace 1% Anhydrite. Trace Shale.
9970-9980	95%	Salt - as above.
	05%	Anhydrite - Trace Shale - as above.
9980-9990	95%	Salt - as above.
	05%	Anhydrite - Trace Shale - as above.
	Trace	Anhydrite - Trace Shale - as above.
10000-10010	95%	Salt - as above
	05%	Anhydrite - trace Shale
10010-10020	90%	Salt - as above.
	10%	Anhydrite - brown crystalline with some white soft.
10020-10030	70%	Anhydrite predominately light brown soft to firm slightly silty in part with dolomitic inclusions.
	30%	Shale - black, soft to firm, very silty, soft, carbonaceous.
10030-10040	40%	Anhydrite - as above.
	60%	Shale - as above.
10040-10050	60%	Anhydrite - as above.
	40%	Shale - as above.
10050-10060	100%	Salt - trace Anhydrite. Trace Shale - black as above.
10060-10070	100%	Salt - as above.
10070-10080	100%	Salt - as above.

10080-10090 100% Salt - as above.
 10100-10110 100% Salt - trace Anhydrite - as above. Trace
 Shale - as above.
 10110-10120 100% Salt, clear, white, crystalline, Trace
 Anhydrite, white, light brown, trace shale.
 10120-10130 100% Salt - as above.
 10130-10140 100% Salt - as above.
 10140-10150 100% Salt - as above.
 10150-10160 100% Salt - as above.
 10160-10170 100% Salt - as above.
 10170-10180 100% Salt - as above.
 10180-10190 100% Salt - as above.
 10190-10200 100% Salt - as above.
 10200-10210 100% Salt - clear, white, crystalline.
 10210-10220 100% Salt - as above.
 10220-10230 100% Salt - as above.
 10230-10240 100% Salt - as above.
 10240-10250 100% Salt as above
 10250-10260 100% Salt - clear, white, crystalline, trace
 Anhydrite, white, light brown.
 10260-10270 100% Salt - as above.
 10270-10280 100% Salt - as above.
 10280-10290 100% Salt - as above.
 10290-10300 100% Salt - as above.
 10300-10310 100% Salt - clear, white, crystalline. Trace
 Anhydrite, white.
 10310-10320 100% Salt - as above.
 10320-10330 100% Salt - as above.
 10330-10340 100% Salt - as above.

10340-10350	95%	Salt - as above. Trace Anhydrite, white, soft.
	05%	Shale - dark gray to black firm, silty, slightly calcareous.
10350-10360	95%	Salt - as above - Trace Anhydrite - as above
	05%	Shale - as above.
10360-10370	100%	Limestone - very dark gray to black, very silty, very shaley, microcrystalline, dolomitic, firm, dense, with trace fossil fragments. Trace calcareous fracture filling; some tan microcrystalline sparry. Trace Anhydrite fracture filling.
	Trace	Anhydrite - brown, silty, with calcareous inclusions.
10370-10380	90%	Limestone - dark gray to black, very silty, very shaley, dolomitic as above with increasing anhydrite fracture fill, calcareous fracture fill.
	10%	Anhydrite - as above.
10380-10390	80%	Limestone - as above with some grading to limey shale.
	20%	Anhydrite - light brown, light gray to brown white, soft, gummy.
10390-10400	80%	Limestone - as above.
	20%	Anhydrite - as above.
10400-10410	70%	Limestone - very dark gray to black, very fine crystalline to microcrystalline, very silty, some very shaley, dolomitic with calcareous and Anhydrite fracture fill.
	30%	Anhydrite - white, light to medium brown, tan, silty, some with dolomitic inclusions.
10410-10420	40%	Limestone - as above.
	60%	Anhydrite - some very marley.
10420-10430	80%	Limestone - as above becoming gray to brown, with some dark gray as above.
	20%	Anhydrite - as above.

- 10430-10440 80% Limestone - dark gray to brown, dark gray to black microcrystalline, very fine crystalline silty in part, some shaley, dolomitic in part some with calcareous and Anhydrite fracture fill.
- 20% Anhydrite - white, light brown, soft to firm, some crystalline.
- 10400-10440 Very Poorly Washed Samples
- 10440-10450 70% Shale - dark gray to brown to black, firm, fissile, very silty some very limey.
- 20% Limestone - dark gray to brown, microcrystalline, hard, dense.
- 10% Anhydrite - white, clear, crystalline, light brown, argillaceous.
- 10450-10460 60% Limestone - as above.
- 20% Anhydrite - as above some gray to brown argillaceous, limey.
- 10% Shale - dark gray to medium silty limey.
- 10460-10470 90% Limestone - cream, light tan, microcrystalline, hard, dense, non fossiliferous, sparry.
- 10% Anhydrite - white, soft, gummy.
- Trace Shale - as above.
- 10470-10480 100% Limestone - as above some becoming very dark gray, silty, micritic.
- 10480-10490 90% Limestone - as above.
- 10% Shale - red to brown, silty, sandy, slightly calcareous to calcareous, some with Anhydrite in fill.
- Some Shale, very light gray to black, silty, firm, calcareous
- 10490-10500 90% Limestone - cream, light tan, very fine crystalline, sparry as above some with trace oolites trace fossil fragments; some very light pink microcrystalline to hard, dense.

10% Shale - as above.

10500-10510 100% Limestone - white, very light tan, cream, microcrystalline, hard, dense, trace oolites, trace fossil fragments, sparry.

Trace 1% Shale - very dark gray, black, firm, silty, calcareous.

10510-10520 100% Limestone - as above some medium gray microcrystalline, silty, siliceous, dolomitic. Trace Chert, white, light gray to brown.

10520-10530 100% Limestone - as above
Very Poor Samples - Abundant Cement.

10530-10540 100% Limestone - as above.
Very poor Samples - Abundant Cement.

10540-10550 100% Limestone - white, very light tan, microcrystalline with trace very fine crystalline, hard, dense, with calcareous fracture fill; some with very fine grained Quartz, Sandstone inclusions. Trace Pyrite inclusions.

NSOFC

Trace 1% Sandstone - clear, very fine grained well sorted, medium to well cemented, calcareous with trace pyrite inclusions, some with black inclusion (possible dead stain).

10550-10560 95% Limestone - as above with trace oolites. Trace fossil fragments.

NSOFC 05% Sandstone - as above some gray very fine grained, very well cemented.

Trace Chert - gray, white, hard, sharp.

10560-10570 95% Limestone - as above.

05% Sandstone - as above.

10570-10580 100% Limestone - as above, white tite, microcrystalline, sparry.

10580-10590 100% Limestone - common Calcite fracture filling.

10590-10600 100% Limestone - as above.

10600-10610 95% Limestone - white, microcrystalline, dense, sparry with abundant healed Calcite fracture filling.

05% Sandstone - gray, very fine grained very well cemented siliceous.

Trace Shale - gray, firm, very slightly to non calcareous.

10610-10620 NO SAMPLE

10620-10630 100% Limestone - as above with trace gray chert. Trace dead oil fracture fill.

10630-10640 100% Limestone - as above

10640-10650 100% Limestone - as above very highly altered sparry.

10650-10660 100% Limestone - White - microcrystalline, dense, sparry, with trace black asphaltic fracture fill.

NO SHOW

10660-10670 100% Limestone - as above.

10670-10680 100% Limestone - as above.

10680-10690 100% Limestone - as above.

10690-10700 100% Limestone - as above.

10700-10710 100% Limestone - as above.

10710-10720 100% Limestone - as above.

Trace Dolomite - very light gray very fine crystalline microcrystalline with fair vuggy porosity, trace black dead stain - No Show.

10720-10730 95% Limestone - as above.

05% Dolomite - as above.

10730-10740 100% Limestone - as above.

Trace Dolomite - as above.

10740-10750 100% Limestone - as above

Trace Dolomite - as above.

10750-10760 100% Limestone - white, microcrystalline, sparry very highly altered common healed Calcite filled fractures.

10760-10770 100% Limestone - as above, trace dead black asphaltic fracture fill.

Trace Dolomite - very light gray, very fine crystalline, microsugrosic with trace vuggy porosity. Trace dead black stain.

10770-10780 95% Limestone - as above.

05% Dolomite - as above becoming predominately light gray to brown. Trace fair yellow fluorescent, trace weak yellow milky to streaming cut, with poor yellow residue ring.

10780-10790 70% Limestone - as above.

30% Dolomite - as above with poor to fair show as above, trace black stain.

Circulate samples at 10790 receive total gas increase from 4 unit to 7 units. Note gas bubbles in mud at shaker probable non-flammable gas. Recommended DST #2 10768 - 10790. Bruce Van Deventer, Ladd Petroleum on location.

10790-10800 80% Dolomite - as above.

20% Limestone - as above.

10800-10810 90% Dolomite - gray to brown, very fine crystalline, microsugrosic with vuggy porosity. Trace common dead black stain.

10% Limestone - white microcrystalline, sparry dense.

10810-10820 80% Dolomite - as above.

20% Limestone - as above.

10820-10830 80% Dolomite - as above. No Stain.

20% Limestone - as above.

10830-10840 90% Dolomite - as above. No Stain.

10% Limestone - as above.

10840-10850 80% Dolomite - as above.

20% Limestone - as above.

10850-10860 50% Dolomite - as above No Stain, Tite.

50% Limestone - as above

10860-10870 30% Dolomite - as above.
70% Limestone - as above.

10870-10880 80% Dolomite - as above.
20% Limestone - as above.

10880-10890 30% Dolomite - as above, tite.
70% Limestone - as above.

NSOFC

10890-10900 60% Dolomite - as above, tite.
40% Limestone - as above.

10900-10910 70% Dolomite - light brown, very fine crystalline,
microsucrosic, with trace- common vuggy
porosity.

NSOFC 30% Limestone - white, very light cream,
microcrystalline, dense, sparry, trace- common
calcite fracture fill.

10910-10920 90% Dolomite - as above with increasing porosity.

NSOFC 10% Limestone -as above.

10920-10930 90% Dolomite - as above.
10% limestone - as above.

10930-10940 90% Dolomite - as above.
10% Limestone - as above.

10940-10950 20% Dolomite - as above.
80% Limestone - as above.

10950-10960 20% Dolomite - as above.
80% Limestone - becoming predominately light tan,
microcrystalline, sparry, with common rounded
pellets or possible altered oolites.

10960-10970 100% Limestone - light tan to cream, pellets
sparite as above.
Trace Dolomite - as above.

10970-10980 60% Limestone - as above.

- 40% Dolomite - light gray to brown, micro-crystalline to very fine crystalline, dense, tite.
- 10980-10990 80% Dolomite - as above.
- 20% Limestone - as above, light tan, microcrystalline.
- 10990-11000 90% Dolomite - light brown, very fine crystalline, dense, tite.
- 10% Limestone - light tan, microcrystalline sparry, dense, tite, very scant trace Shale, medium gray waxy, non calcareous.
- 11000-11010 90% Dolomite - light brown, very fine crystalline, dense, with trace microsucrosic texture.
- 10% Limestone - light tan, microcrystalline, dense, sparry with trace ghost oolitic structure.
- Trace 1% Shale - gray, gray to green, waxy, non calcareous.
- 11010-11020 90% Dolomite - as above.
- 10% Limestone - as above.
- Trace Shale - as above.
- 11020-11030 Mud logger on tour failed to catch sample after trip
- 11030-11040 100% Dolomite - medium to dark brown, very fine crystalline, hard, dense.
- Trace Limestone - as above.
- 11040-11050 95% Dolomite - as above.
- 05% Limestone - as above some white chalky.
- Trace Shale - green, waxy, non calcareous.
- 11050-11060 95% Dolomite - medium brown, microcrystalline to very fine crystalline, hard, dense.
- 05% Limestone - white, light cream, micro-crystalline, dense, sparry, chalky in part.
- Trace Shale - green, waxy, non calcareous.

- 11060-11070 30% Dolomite - as above.
70% Limestone - light tan to tan, with some white,
light cream, microcrystalline, hard, dense.
Common Shale green, waxy, gray to dark gray
waxy non calcareous.
- 11070-11080 100% Limestone - as above.
Trace Shale - as above.
Trace Dolomite - as above.
- 11080-11090 100% Limestone - as above becoming light tan
to light cream.
Trace 1% Shale - as above.
- 11090-11100 100% Limestone - as above.
Trace Shale - as above.
- 11100-11110 100% Limestone - as above.
Trace Shale - as above.
- 11110-11120 100% Limestone - as above.
Trace Shale - as above.
- 11120-11130 100% Limestone - as above.
Trace Shale - as above.
- 11130-11140 100% Limestone - as above
Trace Shale - green, waxy as above.
- 11140-11150 100% Limestone - as above.
Trace Shale - as above.
- 11150-11160 100% Limestone - light brown to light cream
microcrystalline, hard, dense.
Trace Shale - green, waxy, non calcareous.
- 11160-11170 95% Limestone - as above.
05% Dolomite - light to medium brown,
microcrystalline, hard, dense.
Trace Shale - as above.

- 11170-11180 20% Limestone - as above becoming dolomitic.
 80% Dolomite - as above some with Shale
 interlamminations.
 Trace 1% Shale, green, waxy, with some medium
 to dark gray waxy.
- 11180-11190 90% Dolomite - as above with some very coarse
 crystalline sparry some very light tan with
 pink cast microcrystalline, hard dense.
 10% Shale - pale green, medium ray to dark gray
 waxy.
- 11190-11200 95% Dolomite - as above.
 05% Shale - as above.
- 11200-11210 95% Dolomite -as above.
 05% Shale -as above.
- 11210-11220 90% Dolomite - as above with some light to medium
 tan, very fine crystalline.
 10% Shale - as above.
- 11220-11230 70% Dolomite - as above.
 30% Shale - as above.
 Trace Limestone -light cream, microcrystalline,
 chalky
- 11230-11240 30% Dolomite - as above.
 20% Shale - green, medium to dark gray, waxy.
 30% Shale - green, medium to dark gray, waxy.
 20% Sandstone - clear, white, medium gray with some
 fine grained trace very coarse grained well
 rounded to rounded medium to poorly cemented
 very slightly to non calcareous, abundant
 frosted grains; some very well cemented.
- 11240-11250 50% Dolomite - as above.
 10% Limestone - as above.
 10% Shale - as above.

- 30% Sandstone - as above.
- 11250-11260 60% Dolomite - as above.
- 10% Limestone - as above.
- 25% Sandstone - as above.
- 05% Shale - as above.
- 11260-11270 85% Dolomite - light to medium brown, with some dark brown microcrystalline, hard dense.
- 05% Shale - green, waxy, non-calcareous.
- 10% Sandstone - as above.
- 11270-11280 95% Dolomite - as above.
- Trace Sandstone - as above.
- 11280-11290 95% Dolomite - as above.
- 05% Shale - as above.
- Trace Anhydrite - as above.
- 11290-11300 100% Dolomite - as above.
- Trace Anhydrite - as above.
- Trace Shale - as above.
- 11300-11310 100% Dolomite - light tan to medium brown, microcrystalline, hard, dense, trace clear Quartz grains inclusion, fine grained rounded.
- Trace Shale - green, waxy.
- Trace Dolomite with pink cast.
- 11310-11320 100% Dolomite - as above, some cream limey.
- Trace Shale - green, waxy - as above.
- Some sandy Dolomite - some sandy Shale.
- 11320-11330 95% Dolomite - as above some sandy some with pink cast.
- 05% Shale - some green, waxy, some red to brown waxy. Trace maroon waxy; sandy in part, anhydritic in part.

FORMATION EVALUATION

Ladd Petroleum Corporation Salt Valley #1 spudded 29 December, 1983 in the Brushy Basin member of the Jurassic Morrison Formation.

Geological evaluation began 3 January 1984 within the Jurassic - Triassic Navajo Sandstone. The Jurassic Formation between the Morrison and Navajo were penetrated but not described. The gamma log run to surface on the first logging run gives tenuous formation tops through the surface casing set at 2657 feet.

JURASSIC - TRIASSIC

Navajo Sandstone

The Navajo Sandstone in the Salt Valley #1 was typical light orange to buff very fine to fine, subrounded to rounded grains. No shows were encountered.

TRIASSIC

Kayenta Formation

2250-2328

The Kayenta Formation consisted of red-brown fluvial sandstones, shales and siltstones. No shows were encountered.

Wingate Sandstone

2328-2662

The Wingate Sandstone was a light to range very fine to fine grained well sorted quartz sandstone. No shows in Salt Valley #1.

Chinle Formation

2622-3536

The continental Chinle Formation consisted primarily of brick red siltstone with some light orange sandstone thinly interbedded, particularly in the upper and lower portions. No shows were encountered.

Shinarump Member of the Chinle Formation 3176-3536

The Shinarump Sandstone was primarily a poorly sorted, generally white, yellow, orange to red and clear, very fine to coarse grained fluvial sandstone. Red to brown shales and siltstones were interbedded throughout. No shows were encountered.

Moenkopi Formation (undifferentiated) 3536-4452

The Moenkopi Formation consisted of red to brown siltstones and shales with minor amounts of thinly interbedded sandstones, very minor anhydrite. No shows were found in this formation.

PERMIAN

Cedar Mesa Sandstone 4452-5258

The Cedar Mesa Sandstone consisted of light orange to orange red, very fine to medium grained sandstone with minor amounts of thinly interbedded red to brown silty shales. These sandstones were predominately poorly cemented with an anhydrite matrix. No shows were distinguished in the Cedar Mesa Sandstone.

Cutler Formation (undifferentiated) 5258-6696

The Cutler Formation in Salt Valley #1 was generally red to orange sandstone. Sorting and grain size were highly variable, however the sandstone was consistently very poorly cemented. The Cutler sandstone was silty, micaceous and arkosic. Interbedded red to orange siltstones and red to brown shales were noted as were occasional thin, dense, siliceous limestones.

The "Rico" limestone marker was noted at 6342 (6364 sample top). This limestone of about 15 foot thickness was light gray to brown to light cream, microcrystalline to very fine crystalline with traces of broken fossils included.

The "Cutler Sand" and "Cutler Shale" of the prognosis were not readily distinguished in the drill cuttings.

No shows were encountered in the Cutler Formation.

PENNSYLVANIAN

Honaker Trail (Upper Hermosa)

6696-8266

The Honaker Trail Formation is the uppermost member of the Hermosa Group. The upper boundary of the Honaker Trail was picked at the first occurrence of a thick marine limestone. This limestone quite siliceous at the top but did contain diagnostic fossils (fusulinids) at about fifty feet was penetrated.

The alternating clastics and marine carbonates of the upper part of the Honaker Trail gave way to the almost entirely marine sequence of limestones and silty shales of the lower part. No shows were encountered within the Honaker Trail.

Paradox Formation

8266-10364

The restricted marine Paradox Formation was penetrated with the first occurrence of the characteristic dark gray to black limey shales and massive bedded anhydrite (sample top 8288). Show #1 was noted in a very sandy dolomite grading to a dolomitic sandstone from 8320-28. This sandstone was located directly on top of a very anomolous salt (halite) zone 8328-72. A fair sample show with two units gas increase was tested (See DST #1) from 8320-8336 with 100 feet of drilling mud recorded.

Personal communication with Bob Norman of Buttes Minerals of Moab, Utah revealed that although several drill holes in the area had an anhydritic zone that was correlative, the first halite zone encountered in Salt Valley #1 appeared to be unique.

The normal Paradox Salt was topped at 8673.

Consultation with Bob Norman of Buttes Minerals, who has had many years of experience in dealing with the Salt Section in relation to Potash exploration revealed that Salt Valley #1 entered Hite's Salt #1 at 8673, that clastic zone #3 was missing, and that the oldest salt present was Hite's Salt #10. The Pinkerton Trail Formation was encountered under Salt #10. No further shows were encountered. The Cane Creek marker was not present.

Pinkerton Trail Formation

10364-10476

The base of the Salt section occurred at 10,364 where the Pinkerton Trail formation, lower most member of the Hermosa Group was topped. The pinkerton Trail consisted of interbedded anhydrite and a dark gray to black silty, shaley limestone. There were no zones of interest in the Pinkerton Trail.

Molas Formation

10476-10496

The Molas Formation was formed on the erosional surface at the top of the Mississippian Leadville Limestone. In Salt Valley #1 the Molas was very thin and consisted of a red to brown silty, sandy, shale of no economic importance.

MISSISSIPPIAN

Leadville Limestone

10496-11058

The Leadville Limestone was noted at the first occurrence of al light tan to cream oolitic sparite. The limestone became very light altered with depth, and some dead black asphaltic fracture filling was noted.

A significant drilling break that began at 10,772 was circulated at 10,790. A gas increase from 4 units to 7 units was noted. Drill cuttings revealed a weak yellow fluorescence and cut from a light gray to brown microsucrosic Dolomite. DST #2 from 10,768 to 10,790 recovered greater than 8000 feet of salt water.

There were no other zones of interest in the Leadville.

DEVONIAN

Ouray

11058-11165

The ouray Formation was a light tan to tan microcrystalline limestone with thinly interbedded green waxy non-calcareous shales. No shows were found in Ouray.

Elbert

11165-11222

The Elbert Formation was predominately brown dolomite with green and gray shales interbedded throughout. No shows.

McCracken

11222-11266

The McCracken Sandstone Member of the Elbert Formation was found at 11,222. This sandstone consisted of clear, white, well rounded, medium grained frosted quartz grains. There were no shows in the McCracken.

Aneth

11266-11330

At the base of the McCracken Sandstone, Salt Valley #1 penetrated a medium to dark brown microcrystalline, hard, dense, dolomite. This dolomite became light tan to medium brown with thin interbeds of waxy greens hale. The well reached total depth at 11,330 within the Aneth Formation and final logs were run.

Should there be any way that I may help to further evaluate the Salt Valley Prospect or should there be any questions arise, please feel free to contact me at any time.

L. A. Prendergast, Consulting Geologist
187 Reta Drive
Grand Junction, Colorado 81503
(303) 245-3921

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

IN TRIPLICATE
Instructions on
reverse side)

3

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> P & A		5. LEASE DESIGNATION AND SERIAL NO. ML 33530
2. NAME OF OPERATOR Ladd Petroleum Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR 830 Denver Club Bldg. Denver, Colo. 80202		7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 550' FNL, 2130' FWL (NE, NW)		8. FARM OR LEASE NAME Salt Valley
14. PERMIT NO.		9. WELL NO. 1
15. ELEVATIONS (Show whether SP, RT, GR, etc.) 4456' GL		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR S.E. AND SURVEY OR AREA Sec. 16-T24S-R20E
		12. COUNTY OR PARISH Grand
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

(Other) ☐

FULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

ABANDON* ☐

CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐

FRACTURE TREATMENT ☐

SHOOTING OR ACIDIZING ☐

(Other) ☐

REPAIRING WELL ☐

ALTERING CASING ☐

ABANDONMENT* ☒

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Reserve pit was closed and location recontoured to original topography. Reserve pit was allowed sufficient time to settle before top soil was spread. Access road was recontoured to original topography. Location and access road was reseeded with a mixture suggested by State of Utah, State Land & Forestry office, Moab, Utah. Upon finish of reclamation work, surface was inspected by Mr. Stan Baker of that office.

Reclamation finished 6-25-84

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 8/15/84

BY: John R. Baker

18. I hereby certify that the foregoing is true and correct

SIGNED

John R. Baker

TITLE Engineering Assistant

DATE 8-13-84

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

COMMENTS OF APPROVAL, IF ANY:

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

Location: Section 16-24S-20E. 1300' FSL, 1500' FEL.
Contractor: CRC Colorado Well Inc.

- 12-24-83 Set 20" conductor at 50'.
- 12-25-83 MIRT.
- 12-26-83 MI & RURT.
- 12-27-83 RURT.
- 12-30-83 80/1 days. P.D. 146'. Present operation: deviation survey. Made 96' in 5-3/4 hrs. Spud @ 11:30 PM 12/29/83. Surveys: 1/4° @ 70', 1/4° @ 136'. MW: air mist.
DC: \$12,364
CC: \$45,570
- 12-31-83 80/2 days. Drlg @ 722'. Made 579' in 23 hrs. Surveys: 136'/1/4°, 260'/1/4°, 412'/1/4°, 585'/1/2°. Dusted to ± 485', misting from 485' to 722'.
DC: \$8,645
CC: \$67,732 (adjusted)
- 01-01-84 80/3 days. Drlg @ 1175'. Made 453' in 22 hrs (misting). Surveys: 810'/1/2°, 1009'/1°. Encountered water flow @ ± 725', well making ± 100 bbl/hr water. Making ± 225 bbl/hr water from 880' - 1175'.
DC: \$8,320
CC: \$76,052
- 01-02-83 80/4 days. Present Operation: trip for bit. Made 82' in 5 hrs (misting) Survey @ 1235'/1/2°. Mud-up @ 1257' due to excessive water flow.
P.D. 1257'.
- 01-03-84 80/5 days. Drlg @ 1670'. Made 413' in 20 hrs. Surveys: 1325'/0°, 1447'/0°, 1571'/1/2°. MW: 8.9, Vis. 42, WL 25.
DC: \$8,717
CC: \$104,540
- 1-4-84 80/6 days. Drlg. at 2045'. (Navajo). Made 375' in 18 hrs. (Bit trip). Surveys: 1690' 1/4°, 1840'-3/4°, 1996'-3/4°. MW: 10.7 Vis. 36 WL 11
DC: \$16,661
CC: \$121,201
- 1-5-84 80/7 days. Drlg. at 2345'. Made 300' in 22 1/2 hrs. (Wingate) Top Kayenta @ ± 2237', top Wingate @ ± 2335'. Surveys: 2180'-1 1/4°, 2273'-3/4°. MW: 8.8 Vis. 40 WL 11
DC: \$7919
CC: \$129,120

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

- 1-6-84 80/8 days. P.D. 2668'. Top of Chinle @ 2618'.
Present operation: TOH to LD 12½" BHA. Prep to open
hole to 17½". Made 323' in 20 hrs.
Surveys: 2427'-½°, 2580'-½°, 2640'-½°.
MW: 9.0 Vis. 40 WL 15
DC: \$8150
CC: \$137,270
- 1-7-84 80/9 days. Reaming at 540'. Made 490' in 15 hrs.
Strapped out, made 15' correction. Bottom of 12½"
hole at 2683' (SLM). PU 17½" hole opener, now opening
hole to 17½". MW: 9.0 Vis. 38 WL 14.5
DC: \$15,011 CC: \$152,281
- 1-8-84 80/10 days. Reaming at 925'. Made 385' in 23½ hrs.
MW: 9.0 Vis. 32 WL 12.
DC: \$7768 CC: \$160,049
- 1-9-84 80/11 days. Reaming at 1265'. Made 340' in 18½ hrs. (Bit Trip)
MW: 9.0 Vis. 40 WL 17.
DC: \$15,431
CC: \$175,480
- 1-10-84 80/12 days. Reaming at 2000'. Made 735' in 23½ hrs.
MW: 9.0 Vis. 41 WL 19.
DC: \$7076
CC: \$182,556
- 1-11-84 80/13 days. Reaming at 2348'. Made 348' in 19 hrs.
(Trip for bit). MW: 9.1 Vis. 43 WL 16.4
DC: \$15,215
CC: \$197,771
- 1-12-84 80/14 days. P.D. 2683'. Present operation: Circ. to run casing.
Made 335' in 22 ¾ hrs. MW: 9.2 Vis. 40 WL 14
DC: \$7186
CC: \$204,957
- 1-13-84 80/15 days. P.D. 2657'. Present operation: WOC. Circ. and cond
to run casing.. Strap out, SLM 2657'. Ran 68 jts 13 3/8" 61#
K-55 ST&C casing and set at 2657'. Cemented w/1200 sxs Howco light
+ 2% CaCl₂ + ½#/sx flocele + 10#/sx gilsonite. Tail in w/300 sxs
Class "H" + 2% CaCl₂ + ½#/sx flocele. Plug down at 12:15 A.M.
on 1/13/84. Good circ. through out job, cement circulated.
DC: \$98,000
CC: \$302,957

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

- 1-14-84 80/16 days. P.D. 2657'. Present operation: NU BOPE.
Cut-off conductor & 13 3/8" casing. Weld on 13 3/8" head
and pressure test weld to 1000 psi- o.k.
DC: \$36,579
CC: \$339,536
- 1-15-84 80/17 days. P.D. 2657'. Present operation: ND BOPE.
NU BOPE and test. Test plug leaking. Try to pull same,
could not retrieve. ND BOPE, test plug stuck in hold-down
flange above head. Will have to get machine shop to press
out.
DC: \$10,287
CC: \$349,823
- 1-16-84 80/18 days. P.D. 2657'. Present operation: TIH & inspect drill
collars. Pressed test plug out of hold down flange. (Hold-down
flange under-guage). Machined flange to proper I.D., NU BOPE.
Test pipe rams, blind rams & manifold to 3000#-o.k. Test hydrill
to 1500 psi- o.k.
DC: \$10,633
CC: \$360,456
- 1-17-84 80/19 days. Drlg. at 2715' (Dusting). Made 32' in 3/4 hrs.
Finish inspecting DC's, drill float equipment and cement.
Pressure test casing. TOH & PU air hammer & DC's. Dress rotating
head and unload hole, blow hole to dry-up. MW: Air.
DC: \$13,993
CC: \$374,449
- 1-18-84 80/20 days. P.D. 2910'. Present operation: TIH w/mill. Made 195'
in 8 1/2 hrs. (Dusting). Drilled to 2910', made connection, could not
drill ahead. TOH, found bit broken-off clean just above grease seal
buttons. TIH w/bit to guage hole, hole in guage, no fill, tagged fish
@ 2910'. TOH & PU magnet, & TIH. TOH w/magnet. recovered one grease
seal button. Fish appears to be in one piece. MW: Air.
DC: \$16,943
CC: \$390,942
- 1-19-84 80/21 days. P.D. 2910'. Present operation: Milling on junk.
Finish TIH w/mill. Milled on junk for 8 hrs. TOH & PU magnet.
TIH. Fish w/magnet & TOH. Recovered several small pieces of
metal and metal cuttings. Change to flat skirt on magnet & TIH.
Recovered several more small pieces and one large piece. PU
new mill and TIH, Mill on junk. Milled total of 1 1/2 hrs on junk.
MW: Air.
DC: \$16,260
CC: \$407,202
- 1-20-84 80/22 days. P.D. 2910'. Present operation: Milling on junk.
Mill on junk. TOH w/mill. TIH w/magnet. TOH. Recovered a large
piece of metal (piece of bit shank) and several small pieces.
TIH w/magnet. TOH. Recovered very little junk. Junk basket
contained mostly formation cuttings. Junk appears to be sidetracked.
Left short skirt of magnet in hole. TIH w/mill & mill on junk.
MW: Air
DC: \$12,760
CC: \$419,962

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

- 1-21-84 80/23 days. P.D. 2910'. Present operation: Milling on junk.
Mill on junk, TOH w/mill. Recovered approx. 2½# of junk in junk sub. PU magnet, TIH w/magnet & fish. TOH w/magnet. Recovered 5 small iron pieces & cuttings. TIH w/globe basket. Attempt to recover junk in globe basket, no success. TOH w/basket. TIH w/mill.
DC: \$15,812 CC: \$435,274
- 1-22-84 80/24 days. P.D. 2910'. Present operation: TIH w/magnet. Mill on junk. TOH w/mill. Recovered small amt of junk in junk sub including broken bits & inserts. TIH w/magnet & fish. TOH w/magnet. Recovered very little junk including more broken inserts. TIH w/mill and mill on junk. TOH w/mill. Recov. several small pieces of iron, one 10" x 1" piece of magnet cut-lip guide, and 12-14 broken inserts. TIH w/magnet, Recovered No. 1 cone complete w/part of shank attached & one small piece of iron 2" x 1". TIH w/magnet. MW: Air.
DC: \$15,113 CC: \$450,387
- 1-23-84 80/25 days. P.D. 2910'. Present operation: TIH w/globe basket. Finish TIH w/magnet, fish with same. TOH w/magnet, recovered # 2 cone w/piece of shank attached. TIH w/magnet & fish. TOH, no recovery. TIH w/mill & mill on junk. TOH w/mill. Recovered several large and small pieces of iron & 2 complete inserts. TIH w/magnet & fish. TOH w/magnet, recovered several large pieces of cut-lip guide. TIH w/magnet & fish. TOH & recovered # 3 cone complete and several pieces of cut-lip guide. TIH w/magnet and fish. TOH, Recovered several more small iron chunks. PU globe basket & TIH.
MW: Air.
DC: \$11,887
CC: \$462,274
- 1-24-84 80/26 days. P.D. 3158' .(Chinle). Present operation: Survey.
Made 248' in 9 hrs (Dusting). Surveys: 2900'-1°, 2994'-1°, 3148'-3/4°. Finish TIH w/globe basket, cored 42" w/basket. TOH. Recovered 32" core, no junk. TIH w/re-run bit # 6, junk sub and drilled to 2943'. TOH. Recovered no junk. TIH w/re-run bit # 8, drlg. ahead, no indication of junk in hole.
MW: Air.
DC: \$12,017
CC: \$474,291
- 1-25-84 80/27 days. Drlg. at 4080' . Made 922' in 22 hrs. (Dusting)
Surveys: 3383'-1°, 3672'-½°, 3979'-½°.
MW: Air.
DC: \$13,675
CC: \$487,966
- 1-26-84 80/28 days. P.D. 4661'. Present operation: Blow hole.
Made 581' in 18½ hrs. Surveys: 4194'-½°, 4436'-Misrun, 4499'-2½°, 4591'-1 3/4°. Hole got wet at 4661'.
Blow hole and start mist. MW: Air Mist.
DC: \$8855
CC: \$496,821
- 1-27-84 80/20 days. Drlg. at 4732'. (Cedar Mesa). Made 71' in 6½ hrs. Drilled to 4726'. Started making approx 220 BPH water. TOH to surface casing. Load hole with water. Finish TOH. PU BHA & TIH. Drilling with mud.
MW: 8.6 Vis. 47 W1 18
DC: \$19,129
CC: \$515,950

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

- 1-28-84 80/30 days. Drlg. at 4911'. (Cedar Mesa). Made 179' in 22½ hrs. Surveys: 4720'-1 3/4°, 4814'-1½°.
DC: \$18,056
CC: \$534,005
- 1-29-84 80/31 days. Drlg. at 5083'. Made 172' in 22½ hrs. (Cedar Mesa)
Surveys: 4905'-1½°, 5030'-1½°.
MW: 9.1 Vis. 39 Wl 23
DC: \$11,310
CC: \$545,316
- 1-30-84 80/32 days. P.D. 5184'. Present operation: TOH looking for hole in drill pipe. Made 101' in 14 hrs. (Cedar Mesa). Survey: 5123'-1½°. Back on bottom w/new bit, drilled 51'. Lost pump pressure. Dropped carbide for lag, lag normal. Check pumps, O.K. TOH, found hole in box of 9" drill collar. Will inspect drill collars.
MW: 9.2 Vis. 39 Wl 18
DC: \$17,110
CC: \$562,426
- 1-31-84 80/33 days. Drlg. at 5247'. (Cedar Mesa). Made 63' in 6½ hrs
Laid down 1-9" collar w/washed out box, 2-8" collars w/cracked boxes, 1-8" collar w/cracked box and pin, 1-stablizer w/cracked pin. Load out bad collars, PU new collars & TIH. Collars showed no evidence of over or under-torqueing. Will have bad collars checked to determine cause of failure.
MW: 9.2 Vis. 39 Wl 17
DC: \$10,627
CC: \$573,053
- 2-1-84 80/34 days. Drlg. at 5477'. (Cutler). Made 230' in 22½ hrs.
Est top of Cutler at 5258'. Surveys: 5273'-1½°, 5420'-1½°.
MW: 9.1 Vis. 40 Wl 15
DC: \$9273
CC: \$583,326
- 2-2-84 80/35 days. Drlg. at 5709'. (Cutler). Made 232' in 22½ hrs
MW: 9.1 Vis. 41 Wl 14.
Surveys: 5576'-½°, 5666'-3/4°.
DC: \$8804
CC: \$591,130
- 2-3-84 80/36 days. P.D. 5888' (Cutler). Present operation: Survey.
Made 179' in 21 hrs. (2 hrs pump repair).
MW: 9.1 Vis. 41 Wl 13.
DC: \$12,574
CC: \$603,704

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

2-4-84 80/37 days. Drlg. at 6075'. (Cutler). Made 187' in 20 hrs.
MW: 9.0 Vis. 38 Wl 16. Surveys: 5909'-1°, 6032'-1°.
DC: \$7631
CC: 611,335

2-5-84 80/38 days. Drlg. at 6166'. (Cutler). Made 91' in 15½ hrs.
(Bit trip). MW: 9.0 Vis. 44 Wl 14.8
DC: \$16,611
CC: \$627,945

2-6-84 80/39 days. Drlg. at 6381' (Hermosa). Top est at 6364'. Made
215' in 23 hrs. Survey: 6249'-2°.
MW: 9.2 Vis. 40 Wl 16
DC: \$8300
CC: \$636,246

2-7-84 80/40 days. Drlg. at 6577' (Hermosa). Made 196' in 23 hrs.
Survey: 6408'-1½°. MW: 9.2 Vis. 39 Wl 15
DC: \$8695
CC: \$644,941

2-8-84 80/41 days. Drlg. at 6761'. (Hermosa) Made 184' in 21 hrs.
Correction: Top of Rico Lime at 6364'. Top of Hermosa 6708'.
Circ. samples at 6597', no show, Surveys: 6535'-2½°, 6692'- 2 3/4°.
MW: 9.2 Vis. 44 Wl 14
DC: \$9693
CC: \$654,634

2-9-84 80/42 days. P.D. 6893'. Present operation: Survey. Made
132' in 22½ hrs. Surveys: 6820'-Misrun, 6850'-3½°.
MW: 9.2 Vis. 40 Wl 14.
DC: \$10,492
CC: \$665,126

2-10-84 80/43 days. Drlg. at 7023' (Hermosa). Made 130' in
23½ hrs. MW: 9.1 Vis 40. WL 12.5
DC: \$9914
CC: \$675,040

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippian, AFE: \$1,646,795, DHC: \$1,475,845

- 2-11-84 80/44 days. Drlg. at 7054'. (Hermosa). Made 31' in 8 hrs.
Trip for bit. MW: 9.1 Vis. 37 Wl 13.
Surveys: 7011'- 3 $\frac{1}{4}$ °, 7041'- 3 $\frac{3}{4}$ °.
DC: \$17,476
CC: \$692,516
- 2-12-84 80/45 days. Drlg. at 7198'.(Hermosa). Made 144' in 22 $\frac{1}{2}$ hrs.
MW: 9.1 Vis. 43 Wl 14.
DC: \$7013
CC: \$701,529
- 2-13-84 80/46 days. Drlg. at 7218' (Hermosa). Made 23' in 10 $\frac{1}{2}$ hrs.
Survey: 7168'-4 $\frac{3}{4}$ °. TOH. Change out BHA to pendulum assembly
to control deviation. Strapped out, Made 17' correction up-hole.
MW: 9.2 Vis. 46 Wl 14
DC: \$14,998
CC: \$716,527
- 2-14-84 80/47 days. Drlg. at 7322' (Hermosa). Made 104' in 22 $\frac{1}{2}$ hrs.
Surveys: 7245'-4 $\frac{1}{2}$ °, 7310'-4 $\frac{1}{2}$ °.
MW: 9.2 Vis. 47 Wl 11.
DC: \$9141
CC: \$725,668
- 2-15-84 80/48 days. Drlg. at 7461' (Hermosa). Made 139' in 22 $\frac{1}{2}$ hrs.
Surveys: 7372'-4 $\frac{1}{2}$ °, 7436'-4 $\frac{1}{2}$ °. Drilled to 7461' w/40,000#
weight. Deviation increased $\frac{1}{2}$ °. Slack-off weight to 35,000#.
MW: 9.2 Vis. 46
DC: \$8505
CC: \$734,173
- 2-16-84 80/49 days. Drlg. at 7544' (Hermosa). Made 83' in 23 $\frac{1}{2}$ hrs.
MW: 9.2 Vis. 47, Wl 13, Survey: 7500'- 4 $\frac{3}{4}$ °.
Drilling hard dolomite.
DC: \$9246
CC: \$743,419
- 2-17-84 80/50 days. PD. 7603'. Present operation: Survey. Made
59' in 21 $\frac{1}{2}$ hrs. MW: 9.2 Vis. 43 Wl 18.
Surveys: 7561'-5 $\frac{1}{2}$ °, 7561'-6°, 7593'-5 $\frac{3}{4}$ °.
DC: \$9273
CC: \$752,692

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Miss. AFE: \$1,646,795, DHC: \$1,475,875

2-18-84 80/51 days. Drlg. at 7642'. Made 39' in 12 hrs. (Bit trip).
Survey: 7609'-6°. MW: 9.2 Vis. 49, WL 11.2
DC: \$13,538
CC: \$766,230

2-19-84 80/52 days. Drlg. at 7723'. Made 81' in 22½ hrs.
Surveys: 7641'-5½°, 7704'-5°. MW: 9.2, Vis. 46 Wl 12.
DC: \$8250
CC: \$774,480

2-20-83 80/53 days. Drlg. at 7827'. Made 104' in 23 hrs.
Survey: 7768'-5°, MW: 9.2 Vis. 50 Wl 10.5
DC: \$10,427
CC: \$784,907

2-21-84 80/54 days. P.D. 7872'. Present operation: Bit trip.
Made 45' in 17 hrs. (Hermosa). MW: 9.2 Vis. 46 Wl 12.
Surveys: 7831'-5°, 7872'-4½°. Last survey questionable.
Will survey again.
DC: \$17,434
CC: \$802,341

2-22-84 80/55 days. Drlg. at 7954'. Made 82' in 20½ hrs. (Hermosa)
MW: 9.3 Vis. 49 Wl 12. Survey: 7896'-4 3/4°.
DC: \$9101
CC: \$811,442

2-23-84 80/56 days. Drlg. at 8049'. (Hermosa). Made 95' in 22½ hrs.
Surveys: 7959'-4°, 8023'-3 3/4°.
MW: 9.3 Vis. 49 Wl 12.
DC: \$9214
CC: \$820,656

2-24-84 80/57 days. Drlg. at 8099' (Hermosa). Made 50' in
9½ hrs. Survey: 8085'-4½°. Drilled to 8093', bit locked
up. TOH, inspect BHA,- o.k. Change BHA to stiff assembly.
TIH. MW: 9.3 Vis 53 Wl 12.
DC: \$18,425
CC: \$839,081

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Mississippi, AFE: \$1,646,795, DHC: \$1,475,875

2-25-84 80/58 days. Drlg. at 8201'. Made 102' in 23 hrs.

MW: 9.3 Vis. 50 W 11.6

Surveys: 8110'-3 3/4°, 8170'-4°.

DC: \$10,060

CC: \$849,141

2-26-84 80/59 days. Drlg. at 8272'. Made 71' in 23 hrs.

MW: 9.2 Vis. 51 W 10.3

Survey: 8231'-4°.

DC: \$9076

CC: \$858,217

2-27-84 80/60 days. Drlg. at 8294' (Hermosa). Made 22' in 7 hrs.

Survey: 8260'-4 1/2°. TOH @ 8272' to re-line brakes. (8 1/2 hrs).

MW: .2 Vis. 49 W 12.

DC: \$16,346

CC: \$874,563

2-28-84 80/61 days. P.D. 8335' (Hermosa). Present operation: TIH w/ DST tools. Made 41' in 8 1/2 hrs. Survey: 8319'-Misrun.

Drilling break from 8328'-8335' (11 min/ft, down to 2 min/ft).

Good sample show. Condition mud. TOH to DST.

MW: 9.2 Vis. 56 WL 14.

DC: \$9547

CC: \$884,110

2-29-84 80/62 days. Drlg. at 8384' (Hermosa). Made 49' in 3 hrs.

Survey: 8349'-4°. DST # 1: 8320'-8335' (Hermosa).

Times: 15-30-60-120. Pressures: IHP: 4036 IFP: 53-67 ISIP: 587

FHP: 4004 FFP: 67-81 FSIP: 627

Recovered 100' rathole mud. Sampler: total volume 2240 cc. recovered
2200 cc mud at 5 psi. Rw: 1.72 @ 72°F.

MW: 9.3 Vis. 63 W 14.

DC: \$13,998

CC: 898,098

3-1-84 80/63 days. Drlg. at 8487'. Made 103' in 20 1/2 hrs.

Survey: 8476'-3 3/4°. MW: 9.2 Vis. 49 W 19

DC: \$10,719

CC: \$908,817

3-2-84 80/64 days. Drlg. at 8619' (Desert Creek). Made 132' in
23 1/2 hrs. MW: 9.1+ Vis. 49, W 18

DC: \$9040

CC: \$917,857

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Miss, AFE: \$1,646,795, DHC: \$1,475,875

3-3-84 80/65 days. P.D. 8763' (Desert Creek). Present operation: Circ. to log.
Made 144' in 15½ hrs. Survey: 8635'-4½°.
MW: 9.1+ Vis. 54, Wl 24
DC: \$9489
CC: \$927,346

3-4-84 80/66 days. P.D. 8763'. (Paradox Salt). Top at ± 8670'.). Present operation: Logging. Strap out of hole. SLM: 8764.54'. Board: 8768'.
MW: 9.1+, Vis. 54 Wl 16.
DC: \$7615
CC: \$934,961

3-5-84 80/67 days. P.D. 8763'. (Paradox Salt). Present operation: RU to run intermediate casing. Finish logging hole, ran CNL/Litho Density/GR/CAL Sonic/GR/CAL, DLL/MSFL/GR/CAL. Loggers TD: 8743'. Drillers T.D. 8763'. TIH to condition for casing. Strapped in hole. SLM: 8762.64', SLM out of hole, SLM: 8764.64'.
MW: 9.1 Vis. 55 Wl 16
DC: \$42,926
CC: \$977,887

3-6-84 80/68 days. PD. 8763'. Present operation: WOC. Finish RU and ran 9 5/8" casing as follows: (Top to bottom). 63 jts 47# N-80 LT&C
49 jts- 43.50# N-80 LT&C
47 jts- 40# S-95 LT&C
62 jts 47# N-80 LT&C
Casing set at 8620'. Lead cmt w/24 bbls mud flush + 50 bbls brine water followed by 470 sx Class "H" + 0.6% Halad-9 + ¼#/sx flocele. Bump plug w/ 1700 psi. Float held. Plug down at 4:00 A.M. 3/6/84. Good circ. through out.
DC: \$28,330
CC: \$1,006,217

3-7-84 80/69 days. P.D. 8763'. Present operation: Pressure testing BOPE.
ND BOPE, set slips, cut-off casing and set intermediate head.
Pressure test pack-off to 3000 psi- o.k. NU BOPE. Pressure test rams, manifold and kelly cock to 3000 psi- o.k. test hydril to 1500 psi- o.k. PU 6½" drill collars.
DC: \$9381
CC: \$1,015,598

3-8-84 80/70 days. Drlg. at 8778' (Paradox Salt). Made 15' in 1 hr.
PU BHA. TIH 8 stands, pressure test casing to 1000 psi- o.k.
TIH, tag cement at 8544'. Drill cement and float equipment. Drill 15' of formation. MW: 10.1 Vis. 38 Wl 70.
DC: \$235,975 (Includes 9 5/8" casing).
CC: \$1,251,573

3-9-84 80/71 days. Drlg. at 8941'. (Paradox Salt). Made 163' in 22 hrs. Survey: 8893'-4½°.
MW: 10.2 Vis. 40 Wl 64
DC: \$19,137
CC: \$1,270,710

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Miss. AFE: \$1,646,795, DHC: \$1,475,875

- 3-10-84 80/72 days. Drlg. at 9159' (Paradox Salt). Made 218' in
14½ hrs. (Trip for bit.). Survey: 9023'-3 3/4°.
MW: 10.2 Vis. 38 Wl 48.
DC: \$15,800
CC: \$1,286,510
- 3-11-84 80/73 days. Drlg. at 9371' (Paradox Salt). Made 212' in
21½ hrs. Surveys: 9118'-3½°, 9276'-3 3/4°.
MW: 10.2 Vis. 40 Wl 24
DC: \$12,281
CC: \$1,298,791
- 3-12-84 80/74 days. Drlg. at 9610' (Paradox Salt). Made 239' in
8½ hrs. Survey: 9436'- 4 3/4°.
MW: 10.2 Vis. 39 Wl 19.
DC: \$12,328
Cc: \$1,311,119
- 3-13-84 80/75 days. Drlg. at 9794' (Paradox Salt). Made 184' in 23 hrs.
Survey: 9595'-4½°. MW: 10.3 Vis. 50 Wl 22
DC: \$12,849
CC: \$1,323,968
- 3-14-84 80/76 days. Drlg. at 10,064'. (Paradox Salt). Made 270'
in 22 hrs. Surveys: 9785'-4½°, 9943'-4½°.
MW: 10.3 Vis. 37 Wl 16
DC: \$10,286
CC: \$1,334,254
- 3-15-84 80/77 days. Drlg. at 10,402' (Pinkerton Trail, top @ 10,364').
Made 338' in 22 hrs. Surveys: 10,102'-4½°, 10,259'-4½°.
MW: 10.3 Vis. 39 Wl 13
DC: \$11,198
CC: \$1,345,452
- 3-16-84 80/78 days. Drlg. at 10,478' (Pinkerton Trail). Made 76' in
22½ hrs. Survey: 10,447'- 4°.
MW: 10.2 Vis. 37 Wl 12
DC: \$12,107
CC: \$1,357,559

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)

W.I. .5000, 11,500' Miss. AFE: \$1,646,795, DHC: \$1,475,875

- 3-17-84 80/79 days. Drlg. at 10,518'. (leadville, top @ 10,498').
Made 40' in 15 hrs. Trip for bit. MW: 10.3 Vis. 36 WL 17
DC: \$13,824
CC: \$1,371,383
- 3-18-84 80/80 days. P.D. 10,520'. (Leaville.). Present operation: WO loggers.
Circ. & cond. to log, short trip and TOH to log. SLM out of hole.
Board: 10,520.83' SLM. 10,524.60'. RU Loggers, Line had splice @ 10,000'.
splice separated & shorted out electrical leads. WO new logging truck.
DC: \$11,495
CC: \$1,382,878
- 3-19-84 80/81 days. P.D. 10,520'. Present operation: LD Wt. pipe & collars.
RU new logging truck & log well as follows: CNL/Litho Density/ GR/CAL,
BHC Sonic/GR/CAL, DLL/MSFL/GR/CAL. Loggers T.D. 10,518'. TIH, circ &
cond to run liner. TOH LD Collars and wt. pipe.
MW: 10.3 Vis. 41 WL 17
DC: \$13,925
CC: \$1,414,803
- 3-20-84 80/82 days. P.D. 10,520' (Leadville). Present operation: WOC.
RU and ran 51 jts 7 3/4" 46.10# P-110 hydril SFJP liner. Set
liner @ 10,510', top of liner @ 8393' (227' liner lap). Lead
cmt w/20 bbls mud flush, cement w/500 sx Class "H" + 18% salt,
+ 0.6% Halad-24 + 0.75% CFR-2. Displace cement. Sting out of
hanger, pull 120' and reverse out. Good circulation throughout job.
TOH. LD 4 1/2" DP, PU 4 3/4" collars & 3 1/2" DP.
DC: \$163,921
CC: \$1,578,724
- 3-21-84 80/83 days. P.D. 10,520'. Present operation: Drilling plug.
TIH w/8 1/2" bit, tag liner top @ 8393'. Pressure test liner top
to 1000 psi- o.k. TOH, PU 6 1/2" bit, TIH and clean out liner.
Tag plug at 10,427'. Will drill float equipment and cement
before changing to fresh water mud.
MW: 10.3 Vis. 37 WL 19
DC: \$10,572
CC: \$1,589,296
- 3-22-84 80/84 days. Drlg. at 10,543'. (Leadville). Made 23' in 7 hrs.
Drilled plug, collar and cement to 10,505'. Pressure test liner to
1000 psi- o.k. Displace hole to fresh water mud and drill out.
MW: 8.6 Vis. 50 WL 9.8
DC: \$10,824
CC: \$1,600,120
- 3-23-84 80/85 days. Drlg. at 10,620' (Leadville). Made 77' in 22 1/2 hrs.
Survey: 10,568'-4 1/2". MW: 8.7 Vis. 38 WL 9.2
DC: \$13,206
CC: \$1,613,326

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000 BPO, .300 APO, 11,500' Miss. AFE: \$1,646,795, DHC: \$1,475,875

3-24-84 80/86 days. Drlg. at 10,696' (Leadville). Made 76' in
15½ hrs. (Trip for bit.). MW: 8.7 Vis. 40 Wl 8.6
DC: \$14,527
CC: \$1,627,853

3-25-84 80/87 days. P.D. 10,790'. Present operation: TIH w/DST # 2.
Made 94' in 12 hrs. Survey: 10,727'-4°,
MW: 8.7 Vis. 39 Wl 9.
DC: \$10,392
CC: \$1,638,245

3-26-84 80/88 days. Drlg. at 10,824' (Leadville). Made 34' in 3½ hrs. Results
of DST # 2: Leadville. Interval: 10,768'-10,790'. Times: 15-30-60-120.
Bottom chart @ 10,790' pressures: IHP: 4839 IFP: 213-1533 ISIP: 4796
FHP: 4839 FFP: 1533-3610 FSIP: 4754
Recovered 920' slightly gas & WCM & 7100' slightly GCW. Sampler recovered
1440 cc water at 20 psi. MW: 8.7 Vis. 37 Wl 9.8
DC: \$12,620
CC: \$1,650,865

3-27-84 80/89 days. Drlg. at 10,976' (Leadville). Made 152' in
22½ hrs. MW: 8.7 Vis. 39 Wl 8.8
Survey: 10,885'-4°.
DC: \$9530
CC: \$1,660,395

3-28-84 80/90 days. Drlg. at 11,056' (Leadville). Made 80' in
16 hrs. (Bit Trip).
MW: 8.8 Vis. 38 Wl 10.2
DC: \$11,739
CC: \$1,672,134

3-29-84 80/91 days. Drlg. at 11,193' (Elbert). Top of Ouray @
11,060'. Top Elbert 11,163'. Made 137' in 23½ hrs.
MW: 8.8 Vis. 42 Wl 9.8
DC: \$8889
CC: \$1,681,023

3-30-84 80/92 days. Drlg. at 11,292' (Anneth). Made 99' in
23 hrs. Top of McCracken at 11,235', top of Anneth @
11,266'. Estimated T.D. 11,330'.
Survey: 11,200'-3 3/4°. MW: 8.6 Vis. 47 Wl 12
DC: \$8426
CC: \$1,689,449

UTAH

Salt Valley # 1 (E) Salt Valley Prospect, Grand County, Utah (LPC)
W.I. .5000, 11,500' Miss. AFE: \$1,646,795, DHC: \$1,475,875

- 3-31-84 80/93 days. T.D. 11,300'. Present operation: Logging.
Made 40' in 8½ hrs. Ran DIL/SFL/GR/CAL/, litho DL/CNL/GR/CAL
and BHC/GR/CAL from T.D. to 10,510'. MW: 8.7 Vis. 49
DC: \$9293
CC: \$1,698,742
- 4-1-84 80/94 days. T.D. 11,330'. Present operation: Plugging well.
Ran dipmeter/GR/CAL from TD to 10,510'. RD Schl. RU Geosource,
ran directional survey from 10,450' to surface. WOO. LD 4 3/4"
DC's, PU 3½" DP to replace DC's. TIH, Circ. to plug. Start plugging
as follows: Plug # 1 11,330'-11,230' - 20 sxs
2 10,560'-10,460' - 20 sxs
DC: \$43,506 CC: \$1,742,248
- 4-2-84 80/95 days. T.D. 11,330'. Present operation: Running freepoint to
retrieve 9 5/8" csg. Set plug # 3- from 8443'-8343' - 35 sxs. TOH,
perforate 9 5/8" casing @ 7000'. Check for flow, no gas entry.
Pull casing off slips and run free-point, tools failed. RU new
freepoint tools now.
DC: \$16,769
CC: \$1,759,017
- 4-3-84 80/96 days. T.D. 11,330'. Present operation: LD 9 5/8" casing.
Ran freepoint. Found casing 100% free to 4620'. Cut-off
casing at 4620'.
DC: \$11,162
CC: \$1,770,179
- 4-4-84 80/97 days. T.D. 11,330'. Present operation: ND BOPE.
Pulled & LD 4620' of 9 5/8" casing. TIH w/open ended D.P.
Set plugs as follows:
Plug # 4 4650'-4550' - 85 sx Class "H"
Plug # 5 2700'-2600' - 85 sx Class "H"
TOH. Finish LDDP.
DC: \$18,614 + est. casing salvage of \$84,000= credit \$65,386
CC: \$1,723,407
- 4-5-84 80/98 days. T.D. 13,330'. Present operation: RDRT. Set plug # 6
from surface to 25' w/25 sx Class "H". Cut-off head, weld cap on 13 3/8"
casing and set dry hole marker. Rig released at 6:00 P.M. 4/4/84.
DC: \$4500
CC: \$1,727,907

FINAL REPORT.